



College AND UNIVERSITY Business

JANUARY 1953: Oil for Education • A Dean Speaks • Internal Auditing • Recruiting Engineering Students • Planning Reduces Building Costs • Purchasing Record Forms • Food Cost Control

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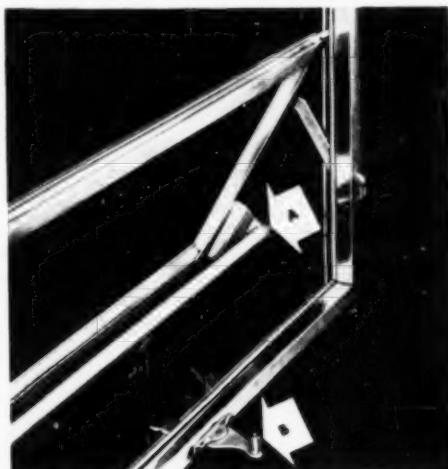
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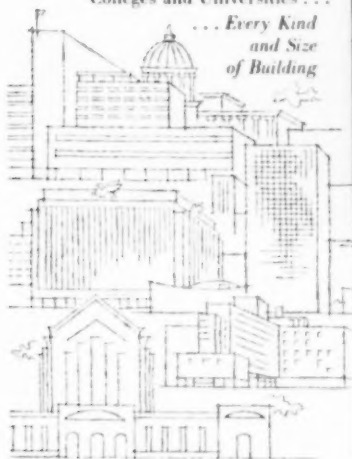
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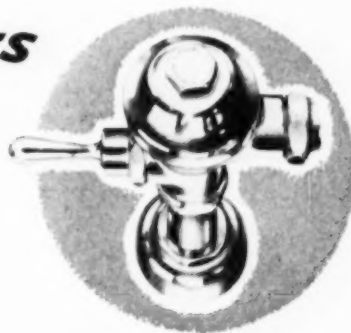
to effect structural economies. Another feature is continuous windows, both sides of which can be washed from the inside. Those on western exposures have glare-resistant glass. Still another modernism is air conditioning which adjusts itself to movement of the sun around the structure. This is another notable building equipped throughout with SLOAN *Flush* VALVES—more proof of preference that explains why . . .

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Among the Authors



Lister Hill

19 Senator Hill calls attention to what he considers to be the significant issues involved in his legislative proposal which caused so much discussion during the recent presidential campaign.



B. C. Keeney

North Carolina and then went to Harvard, where he received his master's and doctor's degrees. At the completion of his graduate work, Dean Keeney became an instructor of history at Harvard, a position he held until he entered the army in 1941. As an infantry captain he saw action in the battles of the Rhineland, Ardennes and Central Europe, for which he received the Purple Heart, Bronze Star, and Silver Star. In the fall of 1946, Dr. Keeney went to Brown University as assistant professor of medieval history, and shortly after became associate dean of the graduate school. In 1949 he became dean of the graduate school and in 1951 a full professor.



H. A. Withey

Howard A. Withey, a partner in the accounting firm of Franke, Hannon and Withey, for many years has been closely associated with accounting problems of higher education. Many years ago he served as a research assistant to the National Committee on Standard Reports for Institutions of Higher Education, through whose efforts the original volume of "Financial Reports for Colleges and Universities" was published. He is at the present time a member of the special committee on college and university accounting of the American Institute of Accountants, which was appointed to cooperate with the national committee on preparation of a manual on "College and University Business Administration," Volume I of which has just been published. On page 24 the author emphasizes the importance of internal auditing and control.



Roy E. Saye

Roy E. Saye, assistant controller and purchasing agent of Mississippi State College, outlines on page 38 the thinking and techniques employed in developing a new system of purchase records and forms at his institution. Before serving as a warrant officer in North Africa with the U.S. Army, he had been an accountant with the U.S. Department of Agriculture. He first came to the Mississippi State College staff as assistant controller and chief accountant, but for the last two years he has been purchasing agent.

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Questions and Answers

Hair-Bobby Pin Problem

Question: In your study of maintenance and repair of women's residence halls, have you found a device that can be put into sinks to catch hair and bobby pins in order to avoid clogging the sinks? We are experiencing considerable difficulty in keeping the sinks open because women permit their hair and bobby pins to go down the drain and ultimately stop up the sewers.—L.O.B., Mont.

ANSWER NO. 1: Sinks that do not have "pop-up" wastes are trouble makers. Sinks that do have this type of waste are easy to clean and do not allow materials to enter the sewers. If rubber stopper sinks are in use it would be well to investigate the possibility of installing pop-up wastes in these sinks. It is possible to do so in some cases.—SAM BREWSTER, *director, department of buildings and grounds, Alabama Polytechnic Institute.*

ANSWER NO. 2: This won't be much help as regards the question of sink traps for hair and bobby pins in showers and sinks in which women students wash their hair. But I can suggest one *preventive* measure in women's washrooms: Take the mirrors from above the sinks and put them on the opposite wall, thus removing the temptation to comb one's hair while standing at the sink, with the resulting clogging of drains. A ledge under the mirror can be used by the students to hold their combs and pins. It's wonderful what this measure can do to reduce plumbing bills.—JANE BARTON, *co-author, "Administrative House-keeping."*

Electrical Appliances

Question: Do you have any regulation as to the amount or extent of electrical equipment in student rooms?—J.S., Ore.

ANSWER: We try, but it is a difficult thing to control. Our rules cover the use of only the ordinary appliances, such as clocks, radios and razors. Television sets are becoming more numerous but not a problem as yet. Hot plates and coffeemakers are taboo, but

we find them stored in closets and drawers. They are then confiscated and held until the end of the school year.

"Spaghetti" wiring is not permitted and the maids keep us informed of this condition.

One of the best solutions, of course, is to have adequate outlets in the rooms, and in our newer dormitories we have a minimum of four double outlets.—WILLARD BUNTAIN, *director of dormitories, Northwestern University.*

Charging for Damages

Question: How do you handle damage in student residence rooms? Is the occupant or culprit charged?—H.M., Ill.

ANSWER: In case of damage within a student residence room, the resident is charged at cost for the actual damage. In double rooms and suites, the residents are normally held jointly responsible for the damage and the bill is a joint bill.

In those instances where a particular individual is known to have done the damage, the charge is made directly to that individual. The important point as far as our policy is concerned is that in nearly every instance the university is reimbursed for damage of this sort.—JOSEPH P. NYE, *director of food service, Columbia University.*

If you have a question on business or departmental administration that you would like to have answered, send your query to COLLEGE and UNIVERSITY BUSINESS, 919 North Michigan Avenue, Chicago 11, Ill. Questions will be forwarded to leaders in appropriate college and university fields for authoritative replies. Answers will be published in forthcoming issues. No answers will be handled through correspondence.

Fraternity Question

Question: Should a college business manager be encouraged to assume any responsibility for the business operation of independently operated fraternities?—F.L.S., Calif.

ANSWER: It is our belief that the counseling program of the university should span fraternities the same as any other housing unit, and that they should be under the supervision of the dean of students' office in all matters of conduct and discipline.

The only direct activities that we assume have to do with the collection of their bills. If they so request we will collect their bills and deposit the amount in any account they designate. This has been very effective and most fraternities have made this request. A few sororities have done likewise.—HARRY WELLS, *vice president, Northwestern University.*

Control Paper Work

Question: Is paper work clogging the channels of communication?—L.H.F., Ala.

ANSWER: Business in our institutions of higher education, as well as industry, is conducted pretty much on paper. However, there is no need for this paper work to clog the channels of communication. Information can flow smoothly through channels established by lines of responsibility and authority provided we do not burden our department heads with unnecessarily complicated and cumbersome reporting. Reporting should be tailored to the needs of each level of management. Each supervisor from department head to president should be supplied with only such information as can be used effectively in doing a good managerial job within his sphere of responsibility.

Paper work makes the channels of communication more, rather than less, effective if the proper controls are exercised over the paper entering the communication stream.—NELSON WAHLSTROM, *controller, University of Washington.*

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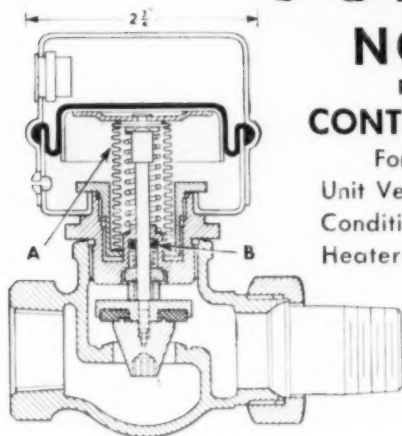
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Prevent leakage of water or steam or loss of vacuum

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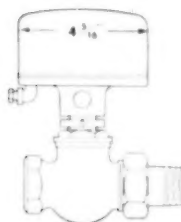
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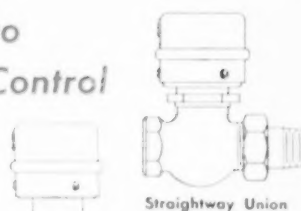
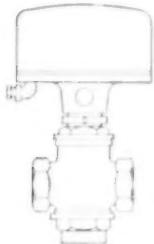
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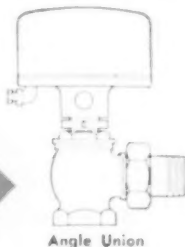
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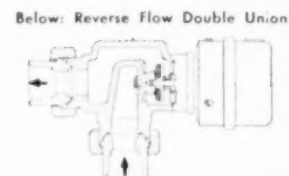
Flored Ends



Angle Union
Screwed Ends



Angle Union



Below: Reverse Flow Double Union



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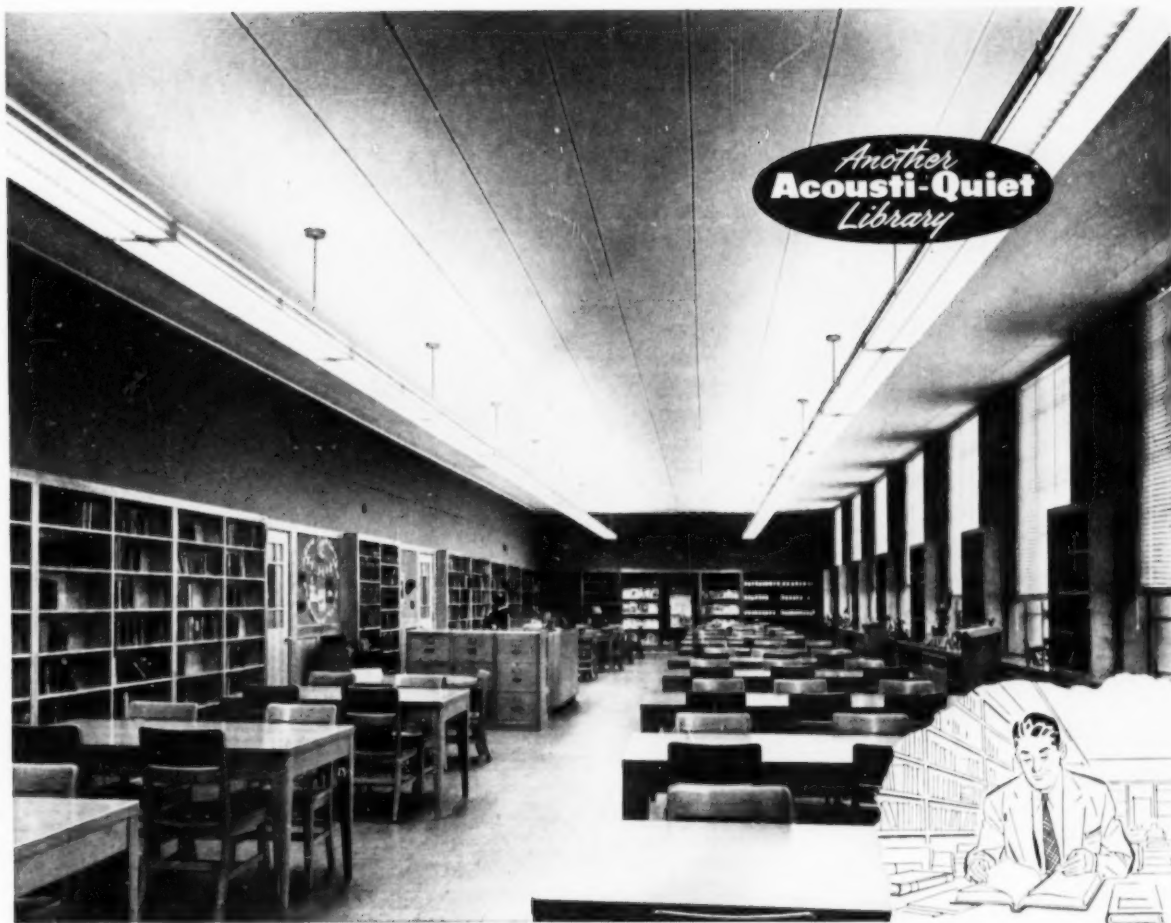
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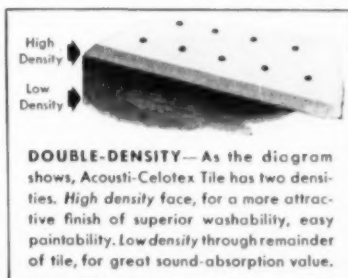
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PUBLIC RELATIONS IS JOB FOR THE BUSINESS MANAGER, TOO

T. N. McCLURE

Business Manager, Knox College, Galesburg, Ill.



THE AMOUNT OF TIME, MONEY AND EFFORT expended by college personnel in the hope of enticing prospective donors to direct their gifts to the institutions they represent is phenomenal. Departments of public relations of the colleges are organized with the sole purpose of ferreting out prospective donors and cultivating their interest. Many college presidents are hired because they are known as "money raisers." While the personnel of the department of public relations and the most valuable man on the campus, the college president, are exerting themselves to get gift funds for the institution, the business manager leans back in his swivel chair, lamenting the impending budget deficit and saying, "Why don't they get some gifts?"

It is high time the business manager realizes that he too has a responsibility in obtaining funds through gifts from donors. He can be of assistance in cultivating good public relations with all groups—friends, alumni, parents of students, students, and the local community, to name a few. However, there is one area the business manager knows better than any other person at the college—and that area is past and current donors.

The receipt of a gift is evidence that the president, the department of public relations, or someone has done a successful job on a particular donor. The gift is evidence of the interest of the donor in a certain project. All gifts are made for a specific purpose, for if a gift is not designated for a specific purpose by the donor, it is intended that the college trustees specify how the gift is to be used.

Here is where the business manager properly and effectively fits into the scheme of things. At periodic intervals he should give the donor a detailed report of the application of the gift funds.

For example, any gift made for scholarship purposes is assigned to a current student. The donor can be told the name of the student who received the scholarship, why it was awarded to him, and the progress he is making at school. This gives life to the gift; the donor sees living evidence of its benefits. The same results are true if funds are given for awards for scholastic accomplishment.

Many gifts are made to institutions for building funds. Each gift is co-mingled with all others so as a result no gift specifically pays for any part of a building. To give the donor an opportunity to see the results of his gift the business manager can divide the cost of the building into "packages" of various sizes, personally informing each donor of the "package" made possible by his gift and inviting him to visit the campus to see the results.

Then there is the donor whose generosity to an institution is the greatest of all, who does not designate the use to which his gift must be put. This is wonderful, but when the use to which the gift is put is decided upon the donor should be advised. And when the results of this application are evident he should be invited to inspect them.

Gifts for the three purposes discussed—scholarships, buildings and general purposes—may be small and often are first gifts; seldom do they represent the full extent of potential giving. The door to other gifts is partially open and the business manager can do much to see that it swings wide. In his office are all the records detailing from whom the gift came and in what amount, for what purpose the gift was made, and to what end the gift was applied. With this information in mind, the business manager can do all within his power to broaden the interest of the donor in projects of the institution.

One college publication over which the business manager has complete control can be used, with considerable revision, as a gift promotion document. This is the annual financial report. The reason I say "with considerable revision" is that most current publications are dry, uninteresting, and generally unintelligible documents printed from habit and mailed to other college business managers to be filed.

These reports can serve a useful purpose when written for someone who can help the institution. They can be the formal reports to all donors showing whence all funds came, particularly donations, and where they have been applied. This is certified proof that the college administration is carrying out the wishes of the donor, and that the donor is making possible the carrying out of the educational program.

Looking Forward

Economy Move

THERE'S LOTS OF TALK NOWADAYS ABOUT THE HIGH cost of education and the apparent need for service in many areas of our land. Less frequently does one hear about the economies that ought to be initiated. Perhaps the colleges have succumbed to the same virus that afflicts governmental operations—the consuming desire to grow bigger and bigger and to spend and spend.

Campus economies are possible on both the academic and the nonacademic front. College presidents and business managers should not hesitate to acquaint their faculties with the financial facts of life. In part, this will call for a reduction in the proliferation of courses and a return to the basic objectives of the institution. There's nothing sacrosanct about a professor-student ratio of 1 to 12. An increase of six to eight more students per class in many such classes would not produce an inferior education, but it would substantially reduce the cost of that education.

Likewise, intensive use of plant facilities through more equitable scheduling of classes could mean more efficient use of facilities and less demand for new buildings. The reduced cost of operation resulting from curtailment of new construction might be redeemed in part by higher salaries for the faculty.

Centralization of certain functions of the institution ought to reduce the cost of operation. Typing and duplicating services can be centralized in large part; the same holds true for purchasing and personnel work.

Plant operation and maintenance activities get out of hand easily. A better training program and assignment of duties will result in substantial improvement in the performance of custodial personnel and a reduction in maintenance costs.

Most colleges, while complaining about high costs, are forgetting that over the years they may have acquired expensive tastes. Travel costs of faculty and staff are way up, and many things are done in the grand manner, including the building program. Either careful self-analysis or a study by outside experts will reveal areas in which expenses could be reduced substantially.

The reduction of such expenses will not be easy. The chap whose ox is gored will be heard from—but loud. However, in view of the present inavailability of funds,

colleges and universities will have to initiate more economies in administration.

Financing Higher Education

BUSINESS ADMINISTRATORS HAVE BEEN FORTUNATE in recent months in being able to study many books that are pertinent to their needs. In previous issues of this magazine, recommendations have been made regarding new books on college business management.

The results of the three-year study by the Commission on Financing Higher Education are now being presented in book and pamphlet form, 11 volumes in all. The final report of the commission entitled "Nature and Needs of Higher Education" briefly reviews the organization of higher education and calls attention to some of the specific financial problems of higher education. It should be of considerable help to laymen interested in higher education.

More helpful and significant to the college business administrator will be the book by John D. Millett titled "Financing Higher Education in the United States," which is the staff report of the commission. This volume reviews in substantial detail the objectives of higher education, costs and administration, sources of income, possibilities for future financing, and the task ahead.

One of the significant outcomes of this volume is the improvement in the interpretation of statistical data now available regarding college operations. It is refreshing to note how the care and feeding of some "sacred cows" in college administration have been critically challenged.

If the college business officer is omniscient, then it's not likely that he will study the volume. For those who must make the decisions in higher education and who feel the need of critical analysis, the book will prove a stimulating aid. In many college business offices there is considerable playing by ear and not enough sound evaluation of factual data before policies are determined.

"Financing Higher Education in the United States" is a workbook that could well sit at the elbow of every college business administrator. Possibly it will inspire him to rethink his own job.

Oil rig in Louisiana bayou. It is not this oil that Senator Hill is fighting for but the oil that lies beyond the 3 mile limit.

THE PRESIDENT OF ONE OF OUR largest universities recently found momentary relief for his school's financial woes in a dream—an oil well on the campus!

With our colleges and universities, our high schools and grammar schools almost universally in serious financial difficulty, I believe harried educators would do well to catch the vision of their imaginative colleague and put oil and education together as a very real and practical means of meeting their most pressing school needs.

That is exactly what a group of my Senate colleagues and I have done in our proposal known as the Oil for Education Amendment to the misnamed and misrepresented Tidelands Oil Bill.

I do not need to belabor for educators and distressed parents the financial crisis that threatens our nation's educational structure from top to bottom. But I do want to comment briefly on the richest inheritance that a bountiful Creator ever bestowed on any nation and suggest how that inheritance may be used to repair our rapidly deteriorating educational system and ensure to this generation of children and the generations to come the quality of schooling they deserve and must have.

Over half a century has passed since the last gold rush in this country, but we are today experiencing the biggest oil rush in history, a rush by three states, California, Texas and Louisiana—backed by big oil companies—to take for themselves \$50,000,000,000 or more in newly discovered oil and natural gas wealth deep under the waters of the Gulf of Mexico and the Pacific Ocean.

With no better claim to the oil deposits than that they happen to be closest to them, these three states with the help of the oil lobby are about to push through Congress a bill to have the American people make them an outright gift of the oil, despite the fact that the Supreme Court of the United States has repeatedly held that this undersea treasure belongs to all the American people—to all the 48 states.



Arthur J. Photomath

AN OIL WELL ON YOUR CAMPUS

LISTER HILL

U.S. Senator from Alabama

Never has a measure in Congress been so grossly misrepresented as this so-called Tidelands Oil Bill. Actually, the tidelands (the lands around the coast that are regularly covered and uncovered by the tides) are not involved in any way in the legislation, just as they were not involved in any way in the Supreme Court decisions. The tidelands belong to the individual states and always have. The lands involved in the bill are those of the great Continental Shelf that begins at the point of low tide and runs far out under the waters of the open sea. In

some places in the Gulf of Mexico this shelf extends out as far as 150 miles from shore.

Two such give-away bills have been pushed through Congress within the last six years, the second one last year. Both were vetoed by President Truman.

Last year's version, which passed the Senate by the narrow margin of 15 votes, would have given away approximately 16,000,000 acres of ocean floor and all the oil and minerals beneath. This is an area larger in size than Massachusetts, Connecticut, Rhode

Areas indicated in black are beneath navigable waters and within state boundaries. Shaded areas indicate that portion of the Continental Shelf lying outside of state oceanic boundaries.



Island, New Jersey and Delaware combined, with the District of Columbia thrown in.

To my sore disappointment, President-Elect Eisenhower during the campaign last fall told the people of Texas, California and Louisiana that he "would sign that kind of a bill." With all due respect to President-Elect Eisenhower, I must express the earnest hope that Congress never gives him the chance.

The question that should concern Congress, the President and the American people is not how to *give* the oil and gas lands away—not even 16,000,000 acres of them—but how to *keep* them and use them in the national interest.

But with appetites whetted by past near successes and future hopes, some proponents of the "give-away" now talk in all seriousness of expanding the bill to include a much greater part, if not all, of the Continental Shelf with its \$50,000,000,000 treasure. This huge figure begins to assume its proper proportion when we consider that it is four times the sum total of the nation's gold at Fort Knox.

Educators suffering their most severe financial crisis of all times with the playing out of scholarship aid to World War II veterans should realize that \$50,000,000,000 is more than 12 times the total tuition paid to educational institutions of all kinds under the G.I. Bill of Rights to date. And petroleum geologists freely confess that the \$50,000,000,000 figure is a conservative estimate of the untold wealth under the sea.

Like the university president, my colleagues and I have put oil and education together and have come up with what we believe to be a sound and

practical remedy for many of the financial pains of our schools and colleges. Our Oil for Education Amendment would dedicate the revenues from our oil and gas reserves in the newly found "public lands" under the sea as a perpetual endowment for colleges and universities, for high schools and grammar schools in all the 48 states. This is in perfect consonance with one of our oldest and wisest national policies—the use of revenues from public lands for educational purposes.

The Ordinances of 1785 and 1787 and the Morrill Act of 1862—signed into law by the Republican party's own Abraham Lincoln—and other acts of Congress granted millions upon millions of acres of our public lands for the establishment and support of grammar schools and high schools, state universities, and land-grant colleges in every state.

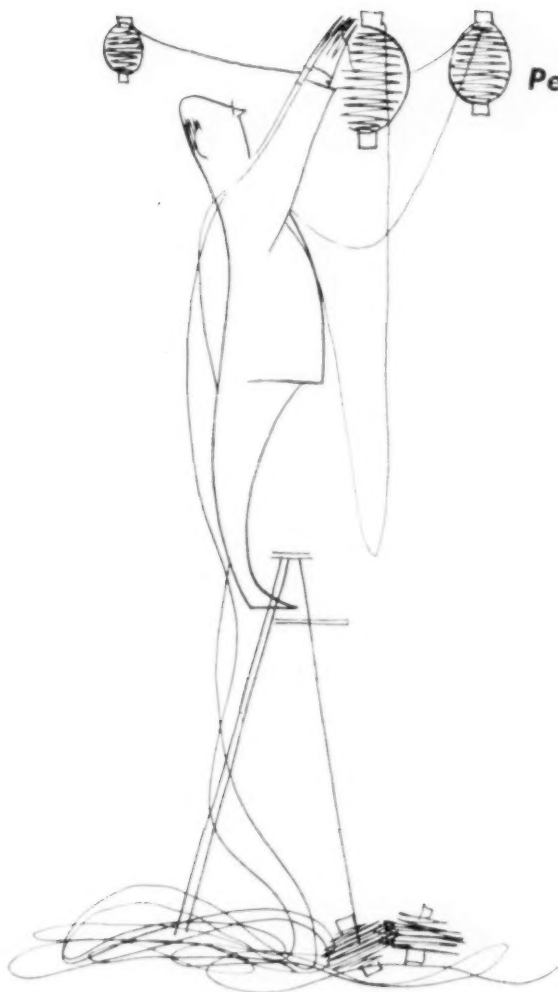
The federal government has today a huge debt. The American taxpayer is carrying a heavy tax burden, and here is oil money for schools without taxes. Here is a windfall for easing the financial straits of our elementary and secondary schools. Here is a bonanza for relieving the agonizing difficulties of colleges and universities, medical schools, dental schools, nursing schools, technological schools, and research institutions by technics such as scholarships and grants-in-aid for specific training and research projects. The possibilities challenge the imagination.

I hope that every educator, parent and taxpayer will insist to Congress and the President that none of these national oil lands be given away—not even 16,000,000 acres of them; that whatever disposition they may feel to be generous to three states such generosity should be tempered with a little bit of justice for the school children of the whole nation—by the simultaneous dedication of some portion of our oil wealth to them.

Tell them that you know of the great oil deposits that lie out at sea even beyond the limits of the 16,000,000 acres; that within the last two years (since exploration and development were suspended till Congress decides what it is going to do) these deposits with a mere 18 producing wells have brought into the United States Treasury more than \$10,500,000 in royalties and rentals; that these millions are being held in a special fund and are immediately available for school purposes as a starter—just like the multiplied millions and billions that will follow—if Congress will but so dedicate and release them and not give them away.

Here we are given the opportunity—and this one, I can assure you, really does knock but once—to devote the nation's wealth under the sea to our children.

Adoption of the Oil for Education Amendment would indeed be like placing an oil well on every school and college campus in America.



Peaceful relations between

FACULTY and BUSINESS OFFICERS

BARNABY C. KEENEY

Dean of Graduate School
Brown University, Providence, R.I.

To relieve learned men of trivial tasks, such as deciding where to hang Japanese lanterns at the commencement dances, and even hanging them, presidents have hired specialists for such chores.

are still alive professors who remember when colleges and even universities were administered largely by members of the faculty. In a laudable effort to relieve learned men of trivial tasks, such as deciding where to hang Japanese lanterns at commencement dances, and even hanging them, presidents have hired specialists for such chores. Some of these specialists are concerned with academic affairs, and are usually called deans. They are so numerous that in some institutions there exists the office, though not the title, of dean of deans. Others, and they are still more numerous, are concerned with material things, such as budgets, buildings, food and lodging, and how to move a desk from one room to another in the longest possible time, with the greatest possible cost, and with the largest number of pieces of paper. These, of course, are our business officers.

THE SUBJECT I WILL DISCUSS, "Relations Between Faculty and Business Officers," is complex, difficult, and in a way embarrassing, just as a discussion of an unsuccessful marriage with one of the participants is bound to be embarrassing, for anything nice one says in such a context bores the listener, and anything unpleasant may be resented.

I am in a sense a divorcee in this context, for I am no longer really a professor, though I still teach. Had I been asked to discuss this subject five years ago, before I became an administrator, you would have heard a spirited address entitled "Beelzebub in the Ivory Tower," or "Drop Dead, Business Manager, Turn Blue."

In giving the faculty point of view, I shall have to look back through a clouded glass. The ideas expressed

in this paper, therefore, are not necessarily my own. Let me add that any resemblance to any persons, living or dead, is coincidental.

The distinction between business and academic administrator is not a real one, nor are our problems different. We have all suffered the same rejection and the same dagger in our hearts.

To refresh my memory, I dug out of the files a long and angry letter I once wrote to our controller. I remarked that a dangerous tension is developing between the faculty and the administration, particularly the business administration. (It was just after this, or just before, that the controller told me that what few friends I have I owe to my wife.) I can add now that nothing has happened since I became a dean to diminish this faculty-administration tension.

The dichotomy that exists between professor and administrator is deep-seated, though fairly young. There

The first cause of dichotomy between faculty and administration is the growth of the administration. As the professors see the vast horde of administrators spread from a small building to a larger building (keeping also the small building) and eventually to a superb modern structure (still keeping the two old buildings), they begin to wonder if the new stack will ever be built for the library so ancient that it is a fitting subject for caricature in the *New Yorker*, or indeed if it will be necessary, since sooner or later there will not be any more money for books. They are, in fact, terrified that the

From a paper presented at the annual meeting of the Eastern Association of College and University Business Officers, Atlantic City, N.J., December 1952.

administrators will devour the universities. That the faculty members are themselves unwilling to perform properly administrative functions does not weaken their argument or temper their feelings.

A second cause of the dichotomy is the feeling of our faculties that the universities are falling into the control of the business officers. This control, real or fancied, is manifested in a number of irritating little ways which I shall mention later, but primarily through the budget. The professor does not know that it is not the business manager but the president who has cut his budget, thereby either making it impossible for him to carry out an educational plan or forcing him to make a choice between two educational plans. This influence by business managers upon academic policy is universally detested. Again, the virulence of the professorial argument is not diminished by his capacity or incapacity to carry out his plan, or its feasibility.

INTERESTS ARE DIFFERENT

A third cause of the dichotomy is the isolation of the business administrator from the faculty. Obviously, the two groups are different sorts of people and have no more in common than the professor and the banker, but they see each other oftener and therefore like each other less. Obviously their interests and manner of thought are different.

No doubt most business officers have been snubbed by members of the faculty they serve. When professors see recent graduates whom they do not particularly admire appointed to minor administrative posts, they do not pause to consider that this person is perhaps the best the institution can afford—they say, instead, what business does this fellow have in our college? He may, indeed, have great administrative promise, but he has not yet acquired the academic patina. As a result of these things, many business administrators tend to keep to themselves. When they eat at the faculty club, often they eat with one another, and after lunch they start a game of cribbage or snooker rather than engaging in the lofty and stimulating discussion going on between the professor of Greek epigraphy and the inorganic chemist on the relative merits of the Dodgers and Red Sox.

These, however, are not the fundamental causes of the dichotomy. The

fundamental cause is the feeling of the faculty that *it* is the university, and that all others, including even students, are either meddling interlopers or birds of passage. This, by the way, is the only context in which I have ever used faculty as a collective noun controlling a singular verb, because it is the only thing the faculty are agreed upon. The faculty feel, and rightly, that if all the administrative officers of all the universities were swept away by a very selective plague—and they say this with tears in their eyes, whether of joy or sorrow I no longer know—that if all these men and women were to disappear, and the professors and a few of the better students were to survive, the universities would continue undiminished in their functions of teaching and research, provided, of course, that the professors were furnished with adequate secretarial help.

The professors know that they are the essential part of the university, that they alone can carry out its primary function of teaching and its secondary one of research, and they feel consequently that all the other officers and employees of the university are their servants, and they are right. History, however, is full of examples of servants who have become the masters—the Turks were once the hired mercenaries of the Arabs. We Arabs are afraid of you Turks.

BOSS AND HIS SUBORDINATES

People outside of a university seem to think that it is organized along lines similar to business or the government, with the boss and his subordinates. The administrators appear to be the bosses, and the faculty the hired help. It is most irritating to members of the faculty to realize, as they all sooner or later do, that people in the town think of them as subordinate to the most piddling administrator.

There are some specific things, some large, some small, that should perhaps be mentioned. I shall treat them in order of decreasing triviality. Of these perhaps the most trivial and therefore the most annoying is the minor administrative female. She is legion and she is arrogant, because she is ignorant. At her best, she is loyal to her particular boss and feels that his functions are the essential ones. She protects him, so that it is almost impossible for anyone whom she regards as less important to see him. I used to have to talk to one of our vice

presidents through his window, which fortunately was on the ground floor, because his secretary would not let me in through his door.

I propose that a short course be established for all new clerical help in the administrative building, on the identification and treatment of faculty. The girls should be taught the stigmata which distinguish the academic person from the student on the one hand, and the salesman on the other. They should be directed to look up at the professor with wide and loving eyes and, if eyelashes are in style at the moment, to flutter them. A well trained girl can do this on the telephone, with the added advantage that those waiting in the office may watch her wiggle. The reply should not be a snarled, "Mr. Smith can't see you today," but a cooed, "Mr. Smith is very anxious to see you. Can you come in after the Christmas vacation?"

HOUSING AND PARKING

Two closely related problems are housing and parking, and neither of them have much to do with the idea of liberal education. It is natural, but perhaps not tactful, that the officials in charge of the university's buildings should have first crack at the university's houses, and that it should be easier for a janitor to get parking space than for a professor. The janitor, after all, is unionized, and it is easier for him to find another building than for the professor to find another university.

Its studies have convinced the Commission on Financing Higher Education that the administration of colleges is generally efficient and businesslike. Yet inefficiencies occur, and they are always pounced upon by an ever critical faculty. Probably in every sizable city in the country a new sidewalk is being torn up today because something has gone wrong with the pipes under it. Let it happen on a campus where money is really tight, though, and department chairmen are furnished with an uncharitable explanation of the cut in their next proposed budget.

Money is the root of all evil, and funds and the budget cause more trouble between the administration and the faculty than does anything else. I see nothing in the financial picture that would lead me to believe that funds will become any looser in the near future. Everyone understands, in varying degree, that it is necessary to

economize, but economy cannot be conducted without friction. The friction, however, may be minimized. Above all, decisions that affect academic policy should never be made by men who are not academic. A great deal of trouble could be avoided if such decisions were made by a joint administration-faculty committee. It would take longer, and many irrelevancies would have to be discussed, but mutual respect and understanding might thus be engendered.

A particularly difficult and annoying problem is the effect of academic freedom on the budget, and on giving to the university. Here we are on really perilous ground. One great university has been set back many years in its development because its officials agreed to impose a loyalty oath on the faculty in order to get more funds from the state legislature.

In the recent political campaign, faculties, or groups within faculties, asserted their right to endorse one or the other candidate. Inevitably the name of the university was used, or made more apparent by its omission, to the great annoyance of prospective donors whose own political convictions were strong.

The damage done by such indiscretion would probably be less than the damage that would ensue from efforts to suppress the expressions of a group in the faculty, even though the larger and saner part of the faculty might feel that expressions of political opinion should be made by professors, not in groups, but singly or in connection with groups that have nothing to do with the university.

Every address should contain a few constructive suggestions, which I now propose to make. The first of these is obvious: Administrators and professors must know each other better. In the present state of affairs, it is the administrators who must make the advances, and they will often be repulsed. Yet they must proceed with the relentlessness of the social climber—for that is how they will be regarded—to worm their way into faculty circles and into faculty confidence. Only thus can the friendly feeling that is the requisite for cooperation rather than conflict be achieved.

A friendly feeling should make possible consultation on the use of institutional funds at an earlier stage than now occurs. Consultation should take place between the administrative officers and men who actually represent



"I used to have to talk to one of our vice presidents through his window, which fortunately was on the ground floor, because his secretary would not let me in through the door of his office."

the faculty, chosen for their intelligence rather than their docility. Through such consultation, a wiser use of our limited funds might be made, and certainly the widespread impression that too much money goes to plant and administration, and too little to education, might be dispelled.

DECISIONS TO BE AVOIDED

Above all, business administrators must avoid involvement in matters of educational policy. It is a wise principle to avoid making decisions you cannot enforce, and only the faculty can enforce educational decisions. In such matters as contracts, you are on ticklish grounds. It is possible, through an unwise lust for government money, to change materially the educa-

tional policy of an institution by building up research in inappropriate areas and, even worse, divorcing research from instruction.

On the other hand, judicious use of contracts can strengthen a legitimate phase of the university's activities. At any rate, the business officer should never urge such ventures but should confine himself to examining the practicability of the financial terms of the contract and determining that the professor really wishes to do what is involved. Let the academic officers of the institution determine whether or not the proposal is educationally sound and whether or not the professor can carry it out.

Educational policy is involved in almost every decision. Obviously, the

barracks is the most efficient sort of housing for large groups, but since education does not end in the classroom or in the library, we must provide privacy for study on the one hand and common rooms for discussion and sociability on the other. A commercial bookstore will sell more books than a room in which students may browse comfortably before they buy, but since our purpose is not to make money by selling books but to get students into the habit of reading the unprofitable establishment is preferable to the profitable.

The administrator must learn the tools of his trade—he must understand accounting, bookkeeping and so forth—but it is even more important that he understand the institution that he is to serve. He must understand the aims of the university, how it works, who actually makes policy. Some of this he may acquire from reading such books as Whitehead's "Aims of a Liberal Education" and Moberly's "Crisis in the Universities," but most of it he must acquire by guided observation. Some of the things that have been carefully concealed from him during his undergraduate years must now be revealed. He must learn that you cannot change the curriculum without changing the faculty, either by persuasion or physically, for change the titles of courses as you will their content will otherwise remain the same.

He must learn that new ideas must come from the faculty, even though they do not always originate there, if success rather than trouble is sought. He must learn about the effects of tenure, or its lack, on the disposition. He must learn that to a few professors the beloved student becomes a monstrous and feared alumnus when he is graduated and that, to a few more, the men who give generously of their time and money while they serve as members of the corporation appear in reality scoundrels whose only purpose is to subvert academic freedom.

He must learn that, however much he has sacrificed in money and position by entering education rather than business, his sacrifice may not be appreciated by those whom he seeks to serve. He must, above all, learn that more flies are caught by honey than by vinegar. He must follow the example set by Pope Gregory the Great in the Sixth Century, when he proclaimed himself not pope, not universal bishop and lord of the church, but servant of the servants of God.

INTERNAL AUDITING AND

HOWARD A. WITHEY

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Certified Public Accountants
New York City

INTERNAL CONTROL OVER AND AUDITING of financial operations of educational institutions is a subject of continual interest to college administrators. It is fitting that this should be so since the stewardship of the institution is reflected in the institution's periodic accountings. Two recent articles in *COLLEGE AND UNIVERSITY BUSINESS* discussed certain aspects of this subject.¹

The function of the independent accountants with respect to college auditing generally is limited to the expression of an opinion as to the financial position and results of operations of the institution and the conformance of the statements to generally accepted accounting principles. In order to express an opinion, the independent accountant will have made an examination in accordance with acceptable auditing standards, which standards require a review of the system of internal control and the accounting procedures. Accountants have found that in the larger institutions it is possible not only to departmentalize the accounting functions and establish an adequate system of internal control but also to establish a program of internal auditing adequate to the needs of the institution. The consequences of failing to establish and operate such controls upon their own initiative or upon the recommendation of the independent accountants have been apparent.

HARD TO DO AT TIMES

It is recognized that in the small institutions that have accounting staffs of two or three employees it is difficult to establish a complete and effective system of internal control. In these institutions the independent account-

ant must act as the internal auditor in a sense, by not only extending the scope of his examination and review but also selecting larger samples of transactions for tests.

The administration of all institutions should bear in mind that the primary responsibility for correctness and adequacy of the financial statements rests with the administration. Similarly, "the institution should not rely primarily on the external audit for the disclosure of defalcations but should make every effort to maintain its system of internal control so as to prevent defalcations and to disclose promptly any that may have been committed. The institution also should carry adequate fidelity coverage."²

Business administrators of some institutions have sometimes considered recommendations of independent accountants as impractical or have been influenced by the accounting staff's opinions of such recommendations. The belief also exists in some institutions that internal auditing can be performed only by an individual designated as the internal auditor. It has been my experience, however, that in virtually all institutions a fairly adequate system of control can be established and a reasonable amount of internal auditing performed without a designated "internal auditor." Some suggestions and observations that may be of practical value are mentioned in subsequent paragraphs.

Budgetary control is the best means yet devised to ensure that expenditures are controlled in accordance with institutional policies. The term "budgetary control" involves more than the preparation of a budget for a particular period against which current expenditures are compared on a classified basis. Budgetary control means that with respect to expenditures all items must be in accordance with authorizations

¹Watson, John L., Internal Audit Control Is Necessary, *College and University Business* 11:19 (November) 1951.

²Harwood, G. E., Acceptable Practices in College Auditing, *College and University Business* 12:25 (February) 1952.

³College and University Business Administration, American Council on Education, Vol. 1, 1952.

INTERNAL CONTROL

Effective internal auditing requires extensive field work where actual transactions take place

and requires interpretation and adjustment as operating conditions vary or policy changes are made throughout the accounting period. It requires adequate top level planning, the setting up of departmental account controls, an account classification adapted to the purpose, and an accounting and budgetary routine that will adequately control expenditures.

The comparison of classified expenditures with a budget that remains unchanged throughout the accounting period is sometimes meaningless unless the budget represents a control over the expenditures and is adjusted to meet changing conditions.

For example, a comparison of salary expenditures to date with the total budget or with a fractional portion of the total budget does not convey the maximum information for management unless the relationship of current expenditures on an annual basis is related to the total budget authorizations for salaries and a free balance or overexpenditure indicated in the current statements.

Anticipated savings in salary expenditures in comparison with the budget can be projected in the interim reports, and this information should be of value to the administration in anticipating operating results for the current period and in making policies for future operations.

Budgets for anticipated income should be adjusted periodically to reflect changed conditions in enrollment or other known factors that will affect the estimated income for the year. Proper periodic adjustments of both estimated income and budgeted expenditures will permit a closer supervision over the accounts and will make it possible to anticipate current operating results in advance so that administrative steps can be taken to keep the expenditures more closely in relation to expected income.

In most instances adequate budgetary control over expenditures can be

maintained without a centralized purchasing department by providing for a *centralized control* over purchasing. Pre-approval of purchase orders as to budget availability and conformity to institutional policies can be accomplished in a practical manner regardless of the number of purchasing sources. Also, a workable method has been adopted by many institutions for applying encumbrances against the individual budget accounts without a detailed recording of purchase orders.

Adequate internal control over expenditures for salaries and wages can be accomplished in many institutions by a simple system of appointments tied into the master budget. The level of appointing authority for authorized positions in the budget could depend upon the nature of the appointment, and the question as to whether budget availability is desirable before appointments are effective would depend upon the degree of control required in the individual institution.

SALARY AND WAGE CONTROL

Internal control over salaries and wages can likewise be effected through control schedules reconciling differences in pay-roll amounts by periods. Internal auditing procedures with respect to salaries and wages should be performed periodically by supervisory employees. In this case, the emphasis should be on authorization and verification of receipt of the salary or wage by the proper individual.

Internal auditing of expenditures other than salaries and wages may be classified as pre-auditing and post-auditing. Pre-auditing of vendors' invoices generally is prescribed in the accounting routine, and the effectiveness of the pre-auditing depends in many instances upon the nature and definiteness of the instructions to the employee charged with this responsibility. Assuming that the employee has been properly instructed as to approvals, certification of receipt of mer-

chandise or service, verification of pricing, compliance with the purchase order, and such things, post-auditing of disbursements to vendors could be limited to a periodic test examination of the vouchers by the chief accountant or other supervisory employee supplemented by a test review of the canceled checks for endorsement and comparison.

Institutions that have adopted adequate systems of budgetary control have found that the expenditures are controlled in accordance with institutional policies; systematic procedures with respect to both pre-auditing and post-auditing can be established; the value and effectiveness of interim financial statements can be improved; and, in general, a greater understanding of the institution's problems is apparent to educational department heads and managers of service enterprises. Adequate budgetary control leads to a better understanding of the institution's problems by the governing board and its committees.

Internal control over and internal auditing of cash and income seem to present more difficult problems than the control or auditing of disbursements. In many respects the problem is similar but, because of the types of income collected and the variation of types of fees and other income by schools, no over-all plan can be devised that would be adaptable to all circumstances. Any qualified independent accountant, whether or not he has had experience in institutional or fund accounting, should be able to render valuable assistance in recommending methods of control over cash transactions to meet the needs of the individual institution. Some general observations may be made with respect to internal control over cash and office organization.

1. Incoming cash should be deposited promptly and intact. The advantages of maintaining deposit accounts rather than mixed deposit and withdrawal accounts should not be overlooked. Under no circumstances should incoming cash be used to cash checks or to make petty disbursements.

2. The individual responsible for handling cash receipts should not have access to the accounts or notes receivable records or be in the position of determining charges to accounts or notes receivable or approving adjustments or write-offs.

3. The cash receiving function should be as far removed as possible

from the disbursing functions and from the responsibility of reconciling bank accounts.

4. Over the counter receipts should be registered by a duplicate receipt or, if by machine, in such manner that the totals of receipts registered can be adjusted or turned back only by some person other than the cashier.

5. Mail receipts other than income from securities should be prelisted by some individual not having access to accounting records or otherwise controlled independently of the cashier.

6. Petty cash disbursements and the cashing of checks should be transacted through separate imprest funds, preferably by an individual other than the cashier to avoid possible mingling of receipts with clearing transactions.

7. Cash receipts at locations other than the main office should be turned over to the cashier daily against a formal receipt or should be deposited intact by the receiving division directly in a bank and a certified copy of the deposit slip forwarded immediately to the cashier with a summary analysis of the nature of the receipts.

8. Cash registers or other recording machines at locations other than the main office should be controlled as to registers, receipt numbers or unlocking mechanisms by the accounting office.

The foregoing is by no means a complete tabulation of all of the controls required over cash, nor is it contemplated that every institution can so organize its accounting department that all safeguards can be provided. On the other hand, even the small institutions, by amending procedures and responsibilities, can protect themselves, to a substantial degree, provided the problem is approached objectively.

Internal control over income may be obtained by a number of different methods. The necessity for internal auditing is much more apparent with respect to these accounts. In offering the following suggestions, it is possible to comment only in general terms because of the peculiarities of the individual institutions.

1. It has been found practical for some institutions to reconcile fee statistics prepared by the registrars' offices with tuition and fees collected by the business offices. Registrars have been found most helpful in revising the form of statistical information to accomplish this control. Other institutions maintain fee registers independ-

ent of the fee collection office, and these registers form the basis for control of either students' accounts receivable or cash collections from fees. Under either of these arrangements the function of internal auditing is required and should be performed either by the internal auditor or by a responsible employee of the accounting department whose duties do not involve fee assessment or collection. It is desirable to have a detailed audit of fees for at least one period during the year even though the over-all control is effective and an audit is mandatory for each period if the over-all control is ineffective.

2. Custody and management of investments of endowment funds present few problems of control if such services are performed by a bank or trust company. Adequate safeguards must be provided if the investments are not so controlled. Many institutions verify the income from securities by reference to published information even though a fiduciary performs the actual collection of income. Schedules of rental collections, mortgage payments, and income from other sources should be maintained by the institution in support and verification of collections made by outside agencies.

METHODS VARY IN INSTITUTIONS

3. Methods of control over miscellaneous gifts will vary among institutions. Mention of this income is made as a reminder that a systematic procedure involving formal receipts and suitable written acknowledgment to the donors and in the records of the governing board or appropriate committee continues to be the best precaution against diversion of the funds.

4. Internal auditing of income from auxiliary enterprises generally is desirable regardless of whether the income is fixed or variable. Fixed income from residence halls or dining halls should be verified by reference to matron's or proctor's reports to the dean's office covering numbers of students occupying dormitory space or using the dining halls. The records of the office that makes dormitory or dining hall assignments can often be devised in such a way as to provide a control over the collections made or to be made by the business office.

Income from athletic contests and entertainments should be supported by schedules of tickets sold. Control of inventory of prenumbered tickets and control of the numbers of tickets issued

by the accounting department afford practical control over the revenue from these activities.

Sound accounting methods must be adopted for the operation of bookstores, cafeterias, college unions, and other activities of a business or service nature. The use of cash registers, sales checks, food controls, and other records is required to the same extent as would be required in commercial businesses. Also, the same requirements for auditing are applicable. A regular program of internal auditing should be followed and regular internal audit reports prepared.

5. Income from sales and services of instructional departments and organized activities is significant in some institutions and should be made the subject of special internal audit investigations. No specific suggestions are possible in an article of this nature except that the internal audit of these activities as with all others should be "dynamic" rather than "passive." In other words, the auditor should be alert to possible deviations from institutional policies; he should endeavor to improve the system and controls, eliminate waste and duplication, determine standards of performance, and offer constructive suggestions to the business officers and managers.

One area of control that is of increasing importance is the accountability for property, particularly equipment and stocks of consumable supplies. These items should be given the same consideration in developing internal auditing procedures as inventories of auxiliary enterprises. The internal auditor should be in a position to advise as to the possible wasteful expenditure of funds in providing similar equipment for several departments and to suggest methods whereby a number of different departments might use the same equipment. Emphasis should be placed upon the institutional ownership of equipment regardless of the particular departmental budget that provided for it.

Effective internal auditing requires extensive field work at locations where the actual transactions take place and cannot be limited to a mere post-audit of transactions at the business office. Regular audit programs should be followed and the programs, reports and audit papers made available to and reviewed by the independent accountants, who should comment upon the nature and extent of the program of the internal auditing.



This is the cover page of the poster sent out to prospective engineering students in 1952.

ON FEB. 1, 1950, WHEN DEAN J. F. Downie Smith of the division of engineering at Iowa State College took a look at the number of new student applications for the fall quarter, he noticed they were but 35 per cent of the number on the corresponding date in 1949—and 1949 had been poorer than the prewar years. It was then he decided something should be done about the matter, setting in motion a program of information concerning engineering opportunities that has operated continuously since that time.

Results of such a program are virtually impossible to evaluate accurately since so many factors influence a young man in his choice of a profession and his selection of a college. The fact remains that enrollment figures in en-

How Iowa State recruits

ENGINEERING STUDENTS

NED DISQUE

Information Service
Iowa State College, Ames

gineering at Iowa State over the last three years have been outstanding.

In the fall of 1950 the college was one of the few where engineering freshman enrollment actually increased. That year freshmen were generally 10 to 25 per cent fewer in engineering colleges throughout the nation. At Iowa State they *increased* by 17 per cent. In 1951 the national average increase of freshmen in engineering was 16.2 per cent over 1950. At Iowa State the increase was 27 per cent, which is all the more remarkable because our enrollment had increased the previous year when others were decreasing. Thus it had a higher base from which to start.

Engineering enrollment at Iowa State increased from 1845 in the fall of 1951 to 2114 in the fall of 1952. Freshman enrollment advanced from 671 in the fall of 1951 to 980 in the fall of 1952. In 1949 the freshman engineering enrollment represented 27 per cent of the total enrollment of the college; in 1950 it was 31 per cent; in 1951, 34 per cent, and in 1952, 38 per cent.

REVIEW CAUSE FOR DROP

Let's go back to 1950 for a moment and review the circumstances that were causing empty engineering classrooms at that time.

This was the period when the flood of ex-G.I.'s was rolling from the campus to industry. In 1949 there were 45,000 B.S. degrees awarded in en-

gineering, and in 1950 the total was 52,000. Estimated annual need for engineers in the 1950-60 decade had been placed at 17,000 or 18,000.

The word went out—often from authoritative sources—that engineering was an overcrowded profession. That word was echoed by the press and radio, and soon high school seniors were being told to avoid engineering, that opportunities in the near future would be poor.

Yet, the facts were that in 1950 we were actually setting the stage for a great shortage of engineers. In the first place, industry absorbed the big graduating classes of 1949 and 1950 with remarkably little difficulty. Apparently, the nation was going to be able to utilize many more engineers each year than had been estimated. At the same time the advice to "avoid engineering" had been shouted so loudly through the land that the percentage of high school graduates who planned to go on to study engineering in college had fallen below the prewar percentage.

The college determined to "set the record straight" for the people of Iowa. A committee was appointed by Dean Smith, and it formulated extensive plans.

Most ambitious part of the program was a direct-mail message to the 12,000 young men who are graduated from Iowa high schools each year.

This involved a single sheet 8½ by 11, duplicated by offset, setting forth

the outlook for engineers, with simple charts showing demand and supply within the profession. With it went a letter over the signature of Dean Smith, inviting the student to make further inquiry either by mail or in person. Also enclosed was a business-reply card on which to indicate an interest in a particular branch of engineering or ask to have additional information sent.

Replies to the letters were all handled individually through Dean Smith's office. Whenever a reply indicated interest in one branch of engineering that card was passed along to the department concerned, and the department head sent the inquirer specific information about that branch.

This system was followed in 1950, and repeated in 1951. In 1952 a somewhat more elaborate folder was printed by the offset process. A new copy idea was tried, too, with a lighter touch in hopes that it would appeal more to the high school student. Length of copy was reduced, and illustrations were increased. It is believed that this is probably the most successful approach that the college has devised, and a departure from the straightforward and sometimes academic style so often used in college and university publications.

Each year the information presented has varied somewhat. The first year the story was slanted to the approaching shortage of engineers in a time of apparent oversupply. In 1951 emphasis was placed on the manner in which the Korean and world situations had changed the outlook. This past year the theme was the current acute shortage of engineers and the estimates that such a shortage would continue for several more years, at least.

Replies via the business-return card have ranged from 400 to 600 each year, which is considered a satisfactory

average. In addition, a number of letters and personal visits to the campus by prospective students can be attributed to the mail campaign.

The cost of this operation has not been small. The mailing piece was \$117 for 20,000 copies in 1950, including stock. When a two-color job was used in 1951, the cost was \$138 for 15,000. In 1952 the folder printed by the offset process came to \$410, including about \$100 for art work, for 14,000 copies. Business-reply cards were printed for about \$3.50 per thousand, and the covering letter to the 12,000 graduates runs just over \$40. Postage and some extra clerical help for mailing must be added to this total.

EXTENSIVE INFORMATION PLAN

The mail campaign has made sure that every young man in Iowa has access to the facts about engineering, as the college sees them, at a time when he is about to make a decision on his future career. But an extensive information plan also has been pursued through other channels.

In Iowa, many high schools set aside one day each year in which professional men, businessmen, educators and others are invited to help counsel students. Known as Career Days, these sessions are regarded as valuable in helping young people choose a life's occupation. Representatives of the di-

vision of engineering have appeared at as many as 36 such programs a year. These representatives are able to talk personally to those who have an interest in the profession, and to arrange to send pertinent literature from the college to them.

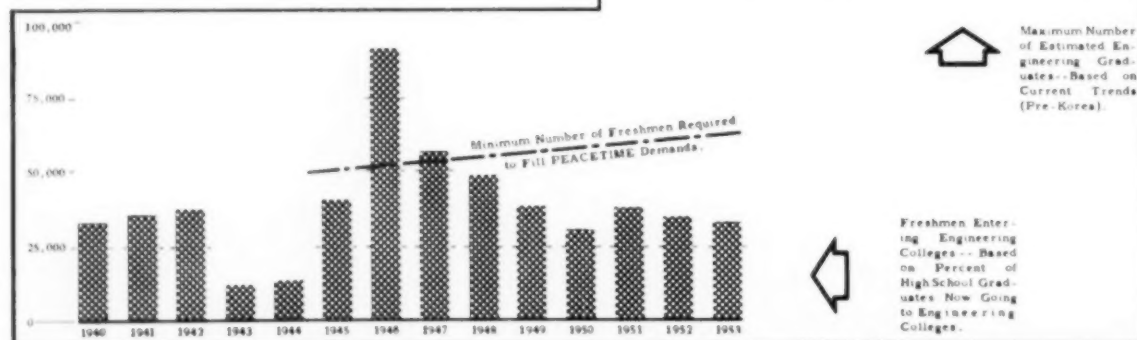
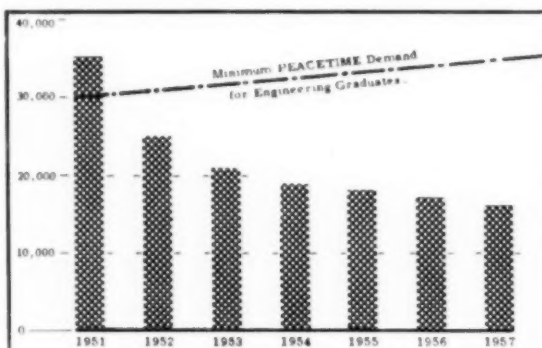
Here are some of the other methods that the college has used to tell the current story of engineering.

1. Representatives of the division of engineering have arranged to speak before alumni groups, engineering and technical organizations, service clubs, and organizations of high school principals, superintendents and junior college administrators. Some of these groups have opened the pages of their journals or news magazines to the engineering story.

2. Iowa State College has a good publication edited by students and called the *Iowa Engineer*. One issue each year is devoted to discussing the opportunities in the profession and the advantages of study at Iowa State. Copies of this issue are sent to all high school libraries in the state.

3. Authoritative articles of special interest in regard to present engineering opportunities have been circulated widely. For example, a report by Henry H. Armsby, associate chief for engineering education, Office of Education, was reprinted in the college printing department and a copy sent

Chart used in mailing piece sent out in 1951 showing the demand for and the supply of engineers.



to each high school principal, superintendent and junior college dean in the state. A covering letter, signed personally by Dean Smith, went along with the reprint. Permission was obtained to have the same article reprinted in *Midland Schools*, the magazine of the Iowa State Educational Association.

4. An article was prepared and sent to the state superintendent of public instruction who distributed it to every high school in the state.

5. Through the information service of the college, stories were sent to newspapers and radio stations. In addition, it was arranged to have a reporter from the largest newspaper in the state (which covers every county in Iowa) come to the campus to ascertain the facts and to interview Dean Smith. Result—a front page story on engineering opportunities.

6. The college has a rather impressive news bulletin that is sent each month to every alumnus and to the parents of all students currently on campus. This publication has been used to present the facts about engineering.

7. A promotional bulletin covering the division of engineering has been distributed widely through high schools and group meetings attended by high school students. A folder type bulletin, it can easily be contained in a No. 10 envelope. It is set up to be mailed second class when large distributions are necessary. Printed in two colors, it is profusely illustrated. A supply of 25,000 was printed in 1950 at a cost of \$1700 for the complete job, including art work and plates. This supply probably will be adequate to cover the needs of the college until 1954 or 1955.

OPERATES RADIO STATION

8. The college owns and operates its own radio station, which can be heard all over Iowa and in parts of six surrounding states. One of its regular programs is put on by the vocational education department and is beamed at high school guidance counselors. Interviews on the program have been arranged with Dean Smith, as well as with the associate director of the Iowa Engineering Experiment Station and the engineering placement officer.

Another program on the station has a wide listening audience among women in the home. Since mothers often have an important influence on the vocational choices of their sons, Dean

April 15, 1950

Dear Sir:

High school graduation is just ahead, and I hope you are thinking of continuing study in the college or university of your choice next fall.

We at Iowa State are anxious that you know the types of study offered here, and of the careers to which they lead. In particular, I would like you to know about engineering, which I feel offers fine opportunities to the high school graduate of 1950.

The enclosed sheet tells a little about engineering and why we expect engineers to be in strong demand in the future.

If you have an opportunity to visit the Iowa State College campus this spring, either at Veishea time or on any Saturday morning, please feel free to call at my office in Marston Hall. One of our staff members will be glad to answer any questions which you may have, and to show you the excellent facilities which the college has available for engineering study.

Sincerely yours,

[Signed] J. F. Downie Smith
Dean

Letter sent with all mailings to prospective students. The 1950 letter was sent April 15, but the 1951 and 1952 mailings were a little earlier.

Smith appeared several times on this program, discussing the field of engineering and present opportunities. Fifteen-minute programs each week have been devoted to each department in the division of engineering. Representatives of industrial corporations have been interviewed with respect to the outlook for engineers in industry. Short spot announcements, similar to "commercials," have been used during breaks between regular programs and during programs that are known to have a high percentage of high school students in the listening audience.

OWNS TELEVISION STATION

9. Iowa State also owns and operates its own television station. It has been utilized to show movies on engineering and live engineering shows originating on campus.

10. The division of engineering picked some 300 distinguished alumni from the files and sent letters to each of them, outlining the situation in engineering so that they can tell the correct story in their own neighborhoods. It may seem odd that professional engineers need to be advised of the current picture in engineering. Actually, professional men sometimes become so intent upon the problems in their own geographic area or in their own particular branch of the profession that they are not always aware of the total view.

11. Each year the college holds an open house in the spring. It is a huge festival that attracts many thousands of people during its three-day showing. Among them are numerous high school students who often come in groups sponsored by the high schools themselves. The division of engineering has an opportunity to go on display along with other divisions of the college. A constant stream of visitors passes through the classrooms and laboratories, and many individuals stop to talk with faculty and students about engineering and the opportunities it offers.

12. Last year it was decided to use a poster which might be placed in high schools. A two-color job 17 by 11 inches was prepared and distributed to all Iowa high schools. For 2000 copies the cost was \$165, including art work, stock and printing.

CONTINUOUS PROGRAM

Some of these 12 methods were used only in 1950 when it was imperative to correct what proved to be a totally erroneous idea that the general public had concerning the "overcrowding" in engineering. Much of the program has been continuous, however, and probably will be until it seems that the demand for engineers is being met adequately. It's a big job, but the division of engineering at Iowa State plans to continue with it.



MONTEREY PENINSULA COLLEGE, MONTEREY, CALIF

How can we make **SUBSTANTIAL SAVINGS** **IN PLANNING?**

SCHOOL BUILDINGS NOW COST MORE to build than at any other time. Generally accepted building cost indices show that from 1930 to 1952 costs have risen from two to two and one-half times for structures of comparable space and equipment. Costs have gone even higher because of other factors, such as our increasing standards of visual and auditory comfort, and the greater complexity of the school plant as an instrument of education.

If the growing child population now flowing through our elementary grades reaches the universities in a few years (and what can stop it?) a busy con-

struction program will be an inevitable consequence. In a period of high costs, then, we are faced with a recognized need for expanded plant facilities with the result that policies that have controlled the design and construction of college buildings are now undergoing a period of reevaluation.

Are the buildings that have sprouted since the war on university campuses the best answers we can find in the light of present and future conditions?

JOHN LYON REID
Architect, San Francisco

The cost of these buildings is high; do they represent a good investment? Can we meet future needs by continuing to build to the same standards within the limits of available financial resources? Or should we seek a reduction of construction costs, and, if so, what can be sacrificed? The answer will not be simple.

Only one part of the answer can be simple; all universities contemplating the construction of any building, no matter how small the program, can scarcely avoid the necessity of making each building dollar go as far as possible. We must be assured that each building, as a long-term financial investment, represents the best value that can be found for the needs of both student and staff, as well as for the public and taxpayer, and that it carries with credit the long tradition of our universities as seats of learning, scholarship and the humanities.

Specific recommendations that I might offer as to structural systems, mechanical installations, space standards, or finish materials would alone be inadequate to cover the real problem of building economies. Building design problems at the university level are so complex and are so often unique to the locality, that any itemization of recommended practices would require an encyclopedic treatment. More to the point, I think, would be an examination of the policies, thinking and attitudes that are responsible for the buildings we see.

There has been a more enlightened attitude on the part of educators, and a growing skill by architects in resolving school plant problems and in

finding good solutions to them, in the elementary schools constructed in the last 15 years than in the school buildings for any other grade level. University buildings in particular can learn a few lessons from them.

In the many good examples of elementary school plants that can be found we see buildings that are shorn of extraneous trappings, that are characterized by clean, direct, simple building forms and room arrangements, and that are straightforward answers to the problem of providing an educational environment. Most of the old architectural inhibitions have vanished; the more successful school buildings are pleasant, functional and stimulating. And many of them are economical!

Where newly formed colleges have been able to build on new sites, the buildings have sometimes been equally good examples of economical and simple construction. Building problems can in this case be solved with a free hand and the character of the buildings can be derived in terms of the financial capacity of the institution. When there are no existing older buildings with which new buildings must harmonize, informality and simplicity are easier for the architect to

achieve. This is especially true when sympathy for such ideas is found in the school administrators who are in responsible direction of the program.

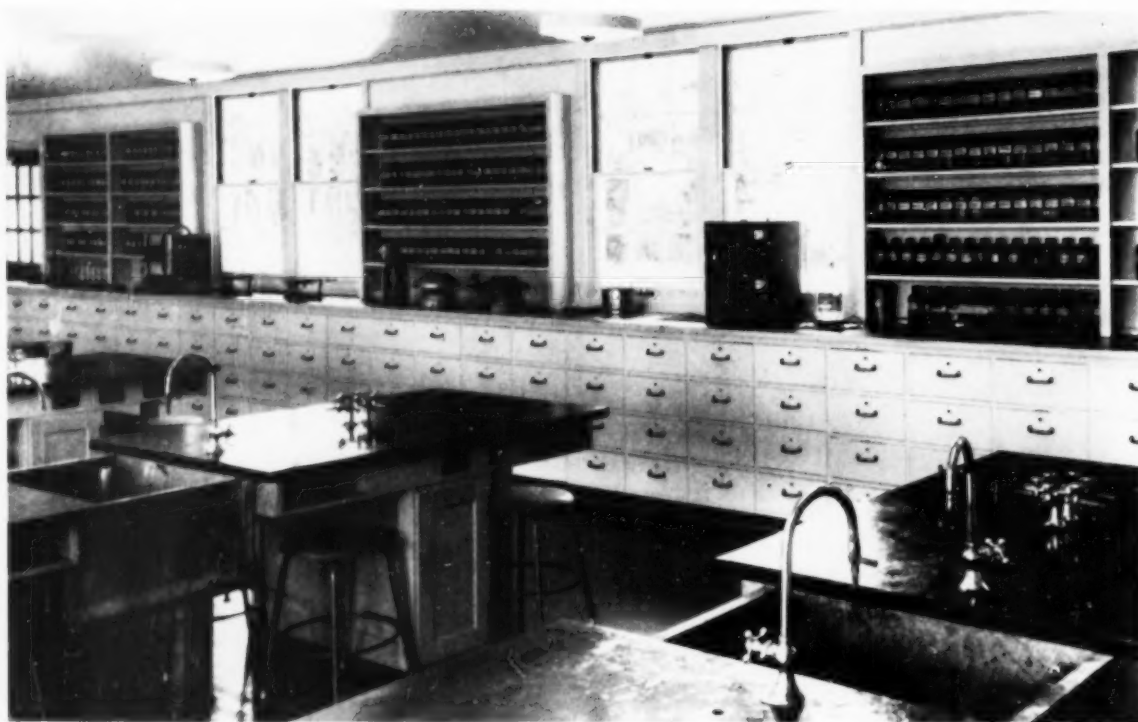
Unfortunately, the new college on a new site is a rare problem. The greater part of the college building program takes place on older campuses, where buildings of considerable age dominate the site and where often the first question requiring an answer is how to fit new buildings into such a setting. Most of our universities and colleges have inherited old buildings that are sound enough to be used for many years yet and that are the object of the sentimental attachment of alumni and even prospective donors (whose interest cannot always be overlooked). What should be done?

To many it seems something of a sacrilege to strike off in a new direction and design the new buildings in the contemporary idiom. The answer is—when sound educational planning and economical buildings are desired, the intelligent policy is to build buildings that are modern in every sense and that make use of advanced practices in planning and construction.

Many old college buildings have been designed in the collegiate Gothic

Isometric drawing of Monterey Peninsula College Campus





Above: One section of the chemistry laboratory at Monterey Peninsula College located in Monterey, Calif. Below: A corner of the library at the same college. The

Monterey buildings were extremely economical to build and their informality is an innovation in college architecture. The architect was Robert Stanton, A.I.A.

Photographs by Julian P. Graham



vernacular, or Italian Renaissance, or Georgian, and are often the results of the misunderstood imposition of an irrelevant architectural style. These buildings were undoubtedly built to conform to the best educational standards known at the time, but our standards have in recent times greatly improved. It is no service to present or future university students and staff to continue superseded and stylistic designs for today's buildings. Why do it?

Too, there are a few universities whose distinguished old buildings are cultural heritages; the original buildings of the University of Virginia are examples. Such old buildings, however, in spite of their architectural qualities, do not always provide the best educational facilities in terms of today's standards. Where comparable buildings exist, it is usually possible for the skillful architect to design, side by side with the older ones, modern buildings which are completely in sympathy with their architectural ancestors, and which, when completed, form a completely harmonious group. Let's hope that the governing boards, administrators, educators, and architectural advisers of universities, in the interest of economy as well as architectural and educational quality, will encourage the design of the most modern buildings.

IMPOSE QUOTA SYSTEM

What are other criteria and practices that will assist in the realization of economies in building? I think it is proper to assume that most universities will experience a considerable growth and will undertake a modernization program as well as the construction of new buildings. It is difficult to know exactly the extent of the growth for which we must build. It is possible, however, by a careful study of regional conditions to make a reasonable estimate of growth probabilities, although any such estimate must be the subject of continuing study and revision. Many universities are being forced to impose a quota system to restrict the institution to a size within which the educational objectives and service program will reach their greatest effectiveness.

If an ultimate size can be determined realistically, this will be a great assistance in forming a basis for a long-term building program. Building uses, needed expansion of facilities, desirable alteration and modernization programs, together with the

problems of the construction budget, can all be scheduled in a more orderly manner with attendant economies than can ever be possible without such foreknowledge. This will eliminate many disorderly and overlapping utility installations, road patterns, and wasted site areas, and will reduce to a minimum the constantly occurring alteration jobs. This study will require several technical and professional skills either in the form of a staff organization or outside professional consultants. An orderly plan for a long-term building program requires time, effort and funds, but it will greatly improve the chances for economies and a soundly conceived plant.

How cheaply can we build? For the older, established universities a decision to construct permanent buildings in one-story wood frame construction may be an extravagance in view of the higher maintenance costs. However, this is not necessarily so, since some of the most charming and usable buildings on the Berkeley campus of the University of California, as well as the oldest, are built of wood. This decision should be made only after a careful analysis of all local conditions.

ECONOMIES BACKFIRE

Generally speaking, the use of long-life materials that will stand abuse, that are as low as possible in first cost, and that require a minimum of maintenance represents good judgment. Many building and finish materials and much mechanical equipment that are extremely low in first cost require such excessive maintenance that apparent economies ultimately backfire.

The provision for flexibility in a building design that will permit as much as possible the rearrangement of partitions and equipment will allow the building to renew itself to accommodate future altered uses. This may add something to the first cost but in certain types of buildings, where changes can be expected, it may be a saving. Wherever possible, all mechanical lines should either be exposed or placed in trenches where easy access is possible.

Complete standardization, within a building or within a building group, should be sought. This applies to structural systems, windows, plumbing assemblies, and all other elements of the structure in which the use of repetitive elements is possible. The following is a statement from Philip E. Keene, college architect of the State

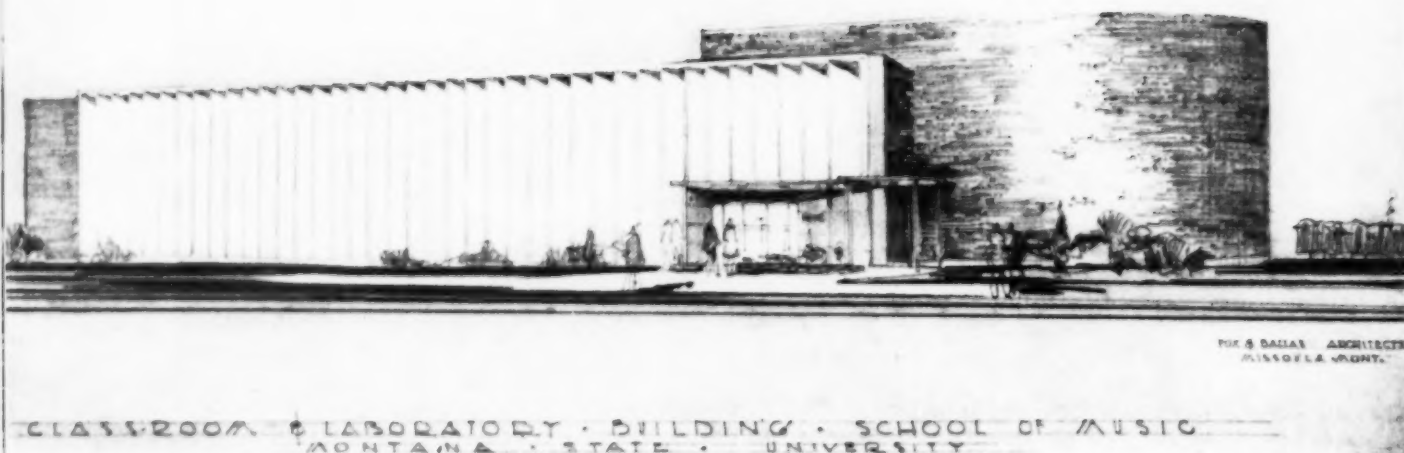
College of Washington, which illustrates the value of this practice:

"In the spring of 1948, we let a contract for a new college library building, which contained 206,000 square feet of space. It cost us \$12.85 per square foot and \$1.10 per cubic foot. Our costs in Pullman are generally about 10 per cent higher than the costs in larger cities because of the fact that the majority of labor, and all building material, including sand, has to be shipped in from some other area. Our low cost on this building was directly traceable to a modular type of construction in which each bay was an exact duplicate of the preceding one. All floors were designed for 100 pounds per square foot live load. This permits us to put book stacks in any portion of the building. Each module (22 feet 6 inches by 22 feet 6 inches) has the same electrical outlets, lighting and ventilating grilles. This permitted all the trades to 'jig' their material. The electrician, for example, was able to bend his conduit in the basement, and practically fabricate the conduit system throughout the floors from the one setup. We theorized from the beginning this procedure would save money. I believe our per square foot cost proved it, and I am satisfied that the contractors were particularly pleased with the savings caused by the repetition. Immediately, too, there has already been the need to make some changes in the use of certain areas, which proves to us the idea is good."

MODERN MORE ECONOMICAL

Fortunately, what we know as "contemporary architectural design" is receiving increasing acceptance. University buildings are about the last building type where successful examples are beginning to appear. Some contemporary design is bad, to be sure, but much of it is good. In it, unnecessary parapet walls, cornices, pediments, all of which are items of expense, have been largely eliminated; the probabilities of economies are greatly increased by the decision to use the modern type of building design.

Above all, university buildings should be considered as laboratories of learning. Their success should be measured in terms of their effectiveness as instruments of education, as well as in their having those human values which offer a warm, stimulating and friendly environment for learning.



Quantity and quality of sound controlled in Montana's

MUSIC BUILDING

THE MUSIC BUILDING UNDER CONSTRUCTION at the University of Montana, Missoula, is a U-shaped building of a contemporary style that is based on a theme of control of quantity and quality of sound.

The new building has been designed throughout for effective teaching conditions and facilities for the estimated music school enrollment for the next 20 years, with additions possible at minimum expense.

The architects, Fox and Ballas of Missoula, designed the structure to meet requirements set forth by the School of Music faculty. Music buildings on other campuses were studied for shortcomings and good points.

The unusual front of the building, as shown in the accompanying sketch, resulted from a primary factor in the design—the control of sound. To provide adequate natural light and yet keep transmission of sounds to a minimum, both from the inside to the outdoors and from room to room, solid

WILLIAM J. FOX Jr.

Fox and Ballas, Missoula, Mont.

windows of glass block were selected for the front, which is the west side. Full-length fixed vertical louvers across the front will admit adequate light but will block off direct rays of the sun, thus reducing the load on the air-conditioning system by about half.

Music school activities are centered in three distinct sections of the building; teaching studios and practice rooms in the north wing; classrooms, music library, and offices along the front portion; instrumental and choral laboratories and a recital hall at the south.

Rooms within rooms, to prevent the transmission of sound, will be used in the building. Floating floors, suspended ceilings, and double walls will prevent the transmission of sound.

Hardwood floors, fastened to sleepers clipped to a sound insulation blanket, are being placed over structural floors

of reinforced concrete. Metal channels suspended from concrete ceilings support gypsum insulating material, to which acoustical tile are fastened.

Separate frame walls are set far enough from concrete corridor walls to provide sound insulation and also space for air ducts and other utilities.

The building contains seven teaching studios, 28 practice rooms, six studio offices, a music radio room and radio control room, music library with listening rooms and individual band and orchestra libraries, an ensemble room; choral and instrumental laboratories, classrooms, the recital hall, staff offices, and rooms for equipment storage and repair.

The recital hall can seat 406 persons and the stage will hold the full university symphony orchestra or a 120 piece band. The seats are of the theater type with folding tablet arms so the hall can be used as a large class and lecture room. The hall will provide suitable quarters for student re-

citals, which are given several times a week during the year.

The most careful attention has been given to the acoustics of the recital hall. Birch veneer wall finish fastened to wooden strips spaced at irregular intervals has been found to improve the walls' effect on music sound waves of various lengths. The ceiling of the recital hall slopes toward the stage, giving the effect of a shell.

The recital hall is designed for a reverberation time of 1.15 seconds, a high standard that is possible because the hall is designed primarily for music, and compromises for stage productions do not have to be made. This reverberation time has been obtained primarily by the shape and dimensions of the hall, the seat upholstering, and the wall covering.

The best acoustical characteristics will be obtained when there is an audience of 300, but little change is expected to be noted with larger or smaller audiences. There will be little increase in reverberation time at very low or very high sound frequencies.

The choral and instrumental laboratories provide adequate space for large groups, such as the university band, orchestra and chorus. Facilities for organ instruction and practice are included. The soundproof, acoustically treated studios and practice rooms will furnish high quality teaching facilities for instruction in musical instruments and vocal training.

Music library facilities will make possible the full use of the school's extensive music library, a field of instruction of growing importance in schools of music throughout the country. The library quarters provide space for 6000 volumes, 10,000 music scores, and 25,000 recordings.

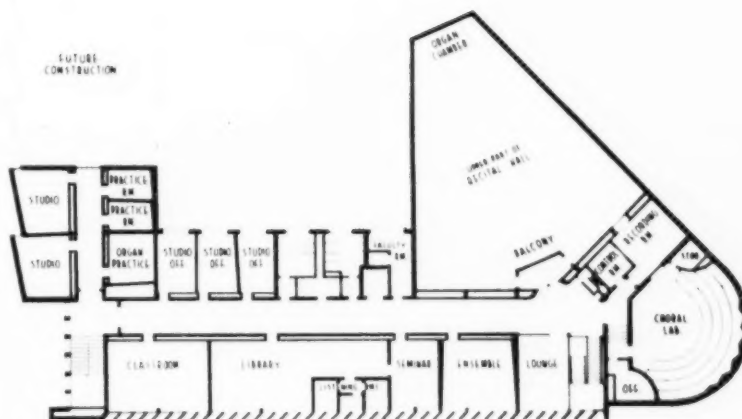
Provision is made for future installation in the recital hall of a large pipe organ, radio equipment consisting of speaker, sound and recording equipment, and television.

The building has a basement, ground floor and second floor of reinforced concrete with a total area of 41,010 square feet or 684,330 cubic feet. The exterior is of red mission brick, with Indiana limestone trim and west facade louvers.

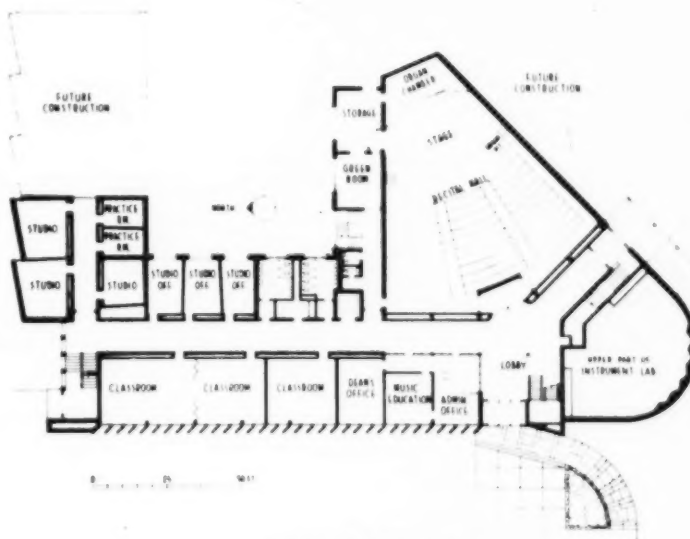
The total construction cost is broken down as follows:

General construction	\$495,025
Mechanical	134,148
Electrical	45,330

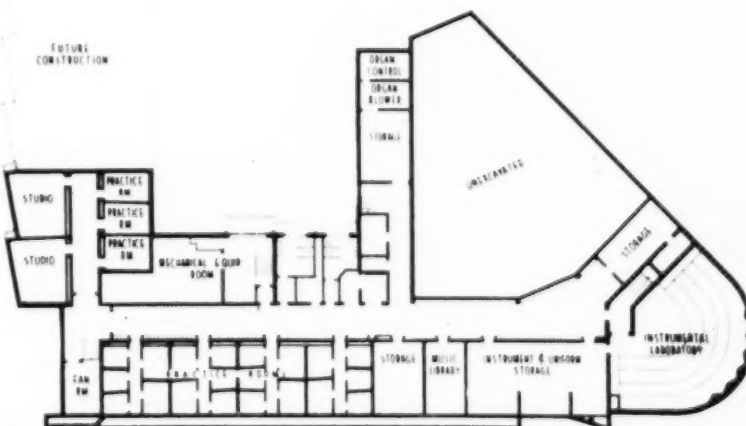
This represents the surprisingly low unit cost of 99 cents per cubic foot.



SECOND FLOOR PLAN



FIRST FLOOR PLAN



BASEMENT PLAN

SALARY SURVEY of "top management" positions

FRED C. FORD
Director of Personnel
University of Mississippi

IN THE SPRING OF 1949 THE COLLEGE and University Personnel Association, through its research committee, conducted a survey of employe personnel practices and policies. This published study has since become the accepted handbook of employe personnel practices in institutions of higher learning in this country.

Feeling that the information in the study should be reexamined after the intervening period, the association has undertaken another survey to determine current personnel policies applied to nonfaculty employes in colleges and universities.

An interesting and popular portion of the 1949 study was the section on salary and wage rates. Data on salaries and wage rates were collected for clerical and professional, crafts and labor, and top management personnel. A salary survey for the same groupings was conducted as a part of the 1952 study.

This article concerns the responses to the questionnaire on "top management" salaries sent to the member institutions of the association. Salary information at this level in private institutions especially is not generally offered for public information. In view of the confidential classification given to this information at many of the schools, the response to the questionnaire was exceptionally good. Seventy-one institutions, or a total of 70 per cent, reported their current salaries. Eight additional schools forwarded their regrets at being unable to provide the information requested because of local policy. A majority of the participating schools, either by a note on the questionnaire or by letter, asked that the name of the school not be identified with the salary information.

The composition of the survey population is given in Table 1 by type of school and student enrollment.

The geographical distribution of the participating institutions was as follows: East, 15; South, 17; Central and

Table 1.—Institutions Participating in C.U.P.A. Management Salary Survey by Type of School and Student Enrollment

Student Enrollment	Four-Year College	Type of Institution Priv. or Mun. Univ.	State University
Less than 1000	9	3	
1000-5000	13	15	6
5000-10,000	1	5	8
Over 10,000		2	9
All Reporting Institutions	23	25	23

Table 2.—Annual Salaries of Management Personnel for the Fiscal Year 1951-52 Reported in C.U.P.A. Salary Survey

	NO. OF INST.	MEAN	MEDIAN	MIN.	MAX.	INTERQUARTILE RANGE
AUDITOR						
Under 1000 enrollment	2			\$ 2920	\$ 3200	
1000-5000	12	\$ 5228		3000	10000	
5000-10,000	9	5886		3960	8200	
Over 10,000	9	6810		5467	9600	
All reporting institutions	32	5723	\$ 5510	2920	10000	\$ 4380-7500
BUSINESS MANAGER						
Under 1000 enrollment	12	6621		4000	10000	
1000-5000	30	7892		5000	11200	
5000-10,000	12	9466		6800	13000	
Over 10,000	10	11877		7260	15900	
All reporting institutions	64	8571	8125	4000	15900	7000-10500
BURSAR						
Under 1000 enrollment	6	4508		3000	7500	
1000-5000	19	5881		3600	8510	
5000-10,000	6	6950		4200	8900	
Over 10,000	8	8144		4080	19296	
All reporting institutions	39	6299	6000	3000	19296	4200-8000
CHIEF ACCOUNTANT						
Under 1000 enrollment	3	3567		2700	4500	
1000-5000	26	4596		2300	7800	
5000-10,000	13	5761		4400	7500	
Over 10,000	10	7133		3900	9936	
All reporting institutions	52	5316	5268	2300	9936	4100-6600
BOOKSTORE MANAGER						
Under 1000 enrollment	7	2754		1600	4000	
1000-5000	25	4198		2400	6600	
5000-10,000	10	5135		3000	7500	
Over 10,000	9	5923		3156	9000	
All reporting institutions	51	4488	4380	1600	9000	3117-5713
DORMITORIES MANAGER						
Under 1000 enrollment	3	2833		1500	4000	
1000-5000	20	4109		2200	6500	
5000-10,000	7	5929		3300	8500	
Over 10,000	10	6860		4500	8900	
All reporting institutions	40	5020	4869	1500	8900	3536-6100
FOOD SERVICES MANAGER						
Under 1000 enrollment	11	3788		2400	6000	
1000-5000	29	4752		3000	7200	
5000-10,000	13	6628		3620	12000	
Over 10,000	11	6851		4320	8703	
All reporting institutions	64	5328	5000	2400	12000	3900-6500

Table 2—Annual Salaries of Management Personnel (Cont.)

	NO. OF INST.	MEAN	MEDIAN	MIN.	MAX.	INTERQUARTILE RANGE
BUILDINGS & GROUNDS SUPT.						
Under 1000 enrollment	10	\$ 4061		\$ 2520	\$ 7000	
1000-5000	32	5777		4080	9000	
5000-10,000	14	6749		3600	8900	
Over 10,000	11	8654		6840	10278	
All reporting institutions	67	6196	\$ 6408	2520	10278	4788-7500
LIBRARIAN						
Under 1000 enrollment	12	4275		3500	7000	
1000-5000	32	5820		3145	9200	
5000-10,000	14	7688		4218	11000	
Over 10,000	11	8826		5000	12900	
All reporting institutions	69	6409	6272	3145	12900	4813-7975
LAUNDRY MANAGER						
Under 1000 enrollment		none reporting				
1000-5000	11	3372		2160	5150	
5000-10,000	6	5051		3720	6360	
Over 10,000	3	3867		3645	4260	
All reporting institutions	20	3950	3983	2160	6360	2688-4380
HOSPITAL SUPERINTENDENT						
Under 1000 enrollment	2			1800	3370	
1000-5000	11	7388		4524	10000	
5000-10,000	9	8993		5300	13180	
Over 10,000	7	11281		8250	14000	
All reporting institutions	29	8495	8500	1800	14000	6355-10000
PERSONNEL DIRECTOR						
Under 1000 enrollment	1				4100	
1000-5000	13	5377		3000	7500	
5000-10,000	12	6289		4100	9800	
Over 10,000	10	7540		5500	10750	
All reporting institutions	36	6246	6000	3000	10750	5000-7284
PUBLIC RELATIONS DIRECTOR						
Under 1000 enrollment	8	5400		3300	9000	
1000-5000	27	6529		3600	15000	
5000-10,000	14	7982		6000	10250	
Over 10,000	11	8205		5000	12250	
All reporting institutions	60	7025	6700	3300	15000	5100-9000
PURCHASING AGENT						
Under 1000 enrollment	3	3373		3000	4000	
1000-5000	27	5167		3536	7500	
5000-10,000	13	6189		4020	8400	
Over 10,000	11	6932		4968	10200	
All reporting institutions	54	5673	5600	3000	10200	4512-6600
REGISTRAR						
Under 1000 enrollment	11	5165		3400	7500	
1000-5000	33	5764		3600	8500	
5000-10,000	12	7057		5500	9000	
Over 10,000	11	8338		5000	11910	
All reporting institutions	67	\$ 6320	\$ 6180	\$ 3400	\$ 11910	\$ 5000-7485

Midwest, 29; Rocky Mountain and Southwest, 9; Pacific Coast, 6. Student enrollment at the schools ranged from 488 to 22,000, with a mean enrollment of 5060.

The questionnaire consisted of a list of 15 positions or areas of directorship for which the current annual salary of the top officer was to be indicated. The salaries reported have been summarized in Table 2 on the basis of school enrollment in keeping with the procedure used in the previous C.U.P.A. Personnel Practices Report.

In setting up Table 2 the reporting institutions were divided into four groups according to student enrollment. At each enrollment level, mean salaries were prepared along with the minimum and maximum salaries re-

ported for each position. The statistical summary for the total survey population includes the median salary and the interquartile salary range in addition to the other information.

OPTIMISTIC POINT OF VIEW

In addition to the request for salaries, the schools participating in the survey were asked to state an opinion on the likelihood of salary increases in the 1952-53 budget. The returns to this question indicate a generally optimistic, if somewhat mixed, point of view. Almost half (48 per cent) of the schools reported that salary increases were likely; 30 per cent, unlikely; the remainder, uncertain.

Several comments need to be made in reviewing the statistical data on

the salaries reported in this study. In preparing the questionnaire, no description other than the position or area title was provided. Any study that attempts to present salaries of this type on the sole basis of position title is faced with problems of local conditions that complicate the responses. Many factors undoubtedly play important rôles in local salary decisions and determinations. The type of school, the facilities that must be provided for students, and unique employment situations, all enter into the salary pattern of the individual school.

One of the interesting aspects in the salary tabulations was the wide range of salaries reported for each of the position titles. The salary range for any one of the management positions was larger than the mean salary for that position. For all positions, except one, the salary range was great enough to include the mean salaries for every other listed position. Within the survey population these wide salary variations are probably reflecting equally diversified types and levels of responsibilities. On many of the campuses the position titles were subject to "dual responsibility" complications. The most frequently reported combinations were those of food services-dormitory manager and purchasing agent-bookstore manager, but many other variations were indicated. In all cases in which these dual capacities were reported, the salary entry was tabulated for the position that appeared from the notes to be the major responsibility.

Although the survey population cannot be considered a representative cross section of the country's colleges and universities, the information on the management personnel salaries should prove to be of considerable interest to anyone wishing to make comparisons of local management salaries with those at other institutions of similar size. Caution is advised, however, in the use of the measures of central tendency for the total survey population.

These statistics adequately summarize the salary information for the participating institutions, but the degree to which these raw measures can be considered a representative sampling of the respective management salaries is problematic. If due consideration is given to limitations imposed by the scope of the study and the size of the sample, the information from the survey can be of assistance to institutions evaluating the salaries of their management personnel.

Time Saving Forms for PURCHASING

ROY E. SAYE

Purchasing Agent
Mississippi State College

WE ARE ACTUALLY APPROACHING A point where the amount of effort required to handle the paper work on many of our purchase orders will equal that put into the production of goods to fill them. The average purchasing agent spends as much as 40 per cent of his time with the paper work necessary to issue purchase orders. One or more clerical and stenographic employees spend full time with forms and paper work for each purchasing agent.

Every time we invest a dollar in forms, we commit ourselves to spend at least \$20 in clerical and administrative salaries to process these "cheap" forms. One set of requisition forms in duplicate will cost less than one penny, but the average cost of typing, checking and signing one set of requisition forms is more than 20 times that amount.

A 10 per cent saving in the cost of printing 10,000 sets of requisition forms will be less than \$10, but a 10 per cent saving in the amount of time necessary to type, check and sign 10,000 requisition forms will amount to more than \$200. It is much easier to design forms to save 10 per cent of the time necessary to process them than it is to save the same percentage in the cost of printing. In many cases it is possible to design forms to save as much as 50 per cent of the time necessary to type, check and sign them.

REQUISITION

The new requisition form (Fig. 1) used by Mississippi State College has been designed for the easiest possible entry of data by typewriter. The new form makes possible a saving of more than 20 per cent in the time required to type an average requisition.

The old requisition form was poorly designed for the following reasons: (1) Three copies were required when only two were needed. (2) Date was located in right-hand corner in difficult position to reach by typewriter. (3) Lines were not spaced to

match typewriter spacing, making it necessary to use the variable line spacer on each line. (4) Item number was seldom used. (5) Estimated price column caused more confusion than help. (6) Section for department, building, account number, and so forth could not be filled in by use of tabular key on the typewriter. (7) Section for 'use of purchasing department' was not

needed. (8) Space was limited for listing items to be ordered.

All lines on the new requisition form match exactly with typewritten double spacing. All sections of the requisition are accessible by typewriter with a maximum of four tabular settings. Approximately 90 per cent of all requisitions can be filled in with only one tabular setting since it is

[illegible]

necessary to fill in only the date, account number, department, quantity and description. All of these entries are on the left side of the form where they can be typewritten without unnecessary tabulating.

The new requisition form shows "prepare in duplicate" at the top where the typist will be sure to notice it before starting to type. The date and all typewritten entries are at the top of the form, making it possible to remove the requisition from the typewriter as soon as the description has been completed.

PURCHASE ORDER

The old purchase order form used at Mississippi State College until recently was designed in a manner similar to our first requisition form. The form presented a pleasing appearance, but it was not practical from the standpoint of typing. The lines for the vendor's name and address were difficult to line up on the original and the copies. It was necessary to jump from section to section while typing. The name of the department and the account number had to be entered on the carbon copies as a separate operation after the original copy had been removed from the set. The terms and conditions on the reverse side of the purchase order form were so lengthy that some vendors refused to ship until a copy of their order forms had been signed. This, naturally, canceled all conditions on our purchase order forms.

The new purchase order form (Fig. 2) has been designed for easy typing and does not have to be removed from the typewriter until it is completed. It has been printed in unit sets with carbon interleaved for ease of typing and handling in the office.

The new purchase order can be typed with only three tabular settings, making it possible for the typist to move across the form without having to tabulate through a large number of tabular stops. Centralized purchasing for several state agencies located on the campus of Mississippi State College makes it necessary to have shipments and invoices sent to different places. In most cases this information can be stamped in the section opposite the vendor by a small addressing machine. The post office address, State College, Miss., is not given in the printed heading of the purchase order. This virtually forces the vendor to use the address in the section for

"Ship PREPAID and invoice in DUPLICATE to."

The "unit price" column has been omitted from the new forms. In the few cases where a unit price is needed on the purchase order, it is much easier to enter it as part of the description than to tabulate it to a special column. The original copy will fit perfectly in stock size or government stamped window envelopes with only two folds. No part of the typewritten or printed information except the name and address of the vendor can be seen through the window of a standard window envelope.

The new purchase order form is designed with copies for use as receiving reports. If all items on the order are delivered at one time, as happens in most cases, the receiving report copy of the order is signed and it is not necessary to prepare a special form. The same receiving report copy of the purchase order is used for the voucher to pay the invoice. The use of this form for the voucher has saved the time of one employee at Mississippi State College.

If a separate receiving report is prepared on each order, it is necessary to check the invoice against the receiving report and against the purchase order. The procedure at Mississippi State College is to check the invoice against the receiving report, which is a copy of the purchase order, and save half the checking time.

In some few cases department heads and employees will sign the receiving report without checking it carefully. However, we have found our vendors to be honest and reliable and we have not, to our knowledge, suffered any loss from the use of our receiving reports. Payment is made after an original invoice is received from the vendor.

Savings of more than 50 per cent in typing time are possible with the use of the new purchase order forms on the average order. This helps to make the morale of the typists much higher since they are able to type almost twice as many purchase orders each day.

PARTIAL DELIVERY REPORT

The old partial delivery receiving report form caused more complaints than everything else connected with purchasing at Mississippi State College. In many cases an order for 20 or more different items on one purchase order was delivered complete except for one

single item. This made it necessary for the department to prepare a partial delivery receiving report listing everything on the order except the one single item not received.

The old partial delivery receiving report form was not spaced to match typewriter spacing. Information was scattered on all sections of the form and could not be filled in by the use of typewriter tabular settings. Some of the information on the form was not needed or used.

The new partial delivery receiving report form (Fig. 3) has been designed to eliminate the necessity for listing the items received. In place of listing all the items received, it is sufficient to list only the number, date and amount of the invoice. All departments are forwarded a copy of the invoice as soon as it is received in duplicate from the vendor.

The partial delivery receiving report is used by the accounting department for a voucher in paying the invoice. The form is spaced to be filled in easily by typewriter, and only three tabular settings are necessary to reach all sections of the form.

It is impossible to make a reliable estimate of the average savings made possible by the new partial delivery receiving report. In some few cases the savings in time for preparation of the form are known to be between 95 and 100 per cent. The greatest objection to centralized purchasing and central receiving has been eliminated, and the preparation and checking of receiving reports greatly simplified.

PAPER AND PRINTING

The requisition, purchase order, and receiving report form are all on No. 1 bond paper, substance 13, first copy white. This is a good grade of white paper that gives a neat appearance and should last for at least 10 years with ordinary use and proper filing. This is much longer than there is any need to keep the forms. The substance 13 paper is light and requires less filing space than paper usually used.

The forms are all printed in royal blue ink. This color of ink is slightly more expensive than black, but gives a much neater appearance to the forms. The typewritten entries in black stand out on the forms and are much easier to read than when the printing and the typing are all one color. The ease of reading and the pleasing appearance offset the small additional cost of the special color printing.

Should a college budget for

NEWSPAPER ADVERTISING?

LESTER M. NICHOLS

Director of Publicity
The City College of New York

COLLEGE AND UNIVERSITY PAID newspaper advertising for promotion of evening session and adult education, general student recruitment, public relations, solicitation of financial aid, alumni fund raising, and sports programs shows a definite upswing throughout the nation. In a survey of 110 colleges and universities, completed in April 1952 for presentation at the national convention of the American College Public Relations Association, these interesting facts were uncovered:

More than \$238,275 is spent annually for paid advertisements by 50 of the 81 institutions that participated. Twenty-nine colleges and universities did not return the questionnaire.

The majority of the state universities throughout the nation replying to the survey do not advertise for reason that the state law prohibits paid newspaper advertising or that the state does not provide funds for this purpose. Thirty-one institutions do no advertising at all, for various reasons. Most of the new and small institutions find that it pays to advertise. They point out significant increases in student enrollment as testimony to this fact.

A few colleges commented that the only reason they allocate funds for advertising is that they want to keep the good will of the local press.

Probably two-thirds of the money spent by the institutions is for promotion of evening, extension and adult education courses. Fifty-two per cent of the colleges and universities, in this connection, indicated they were planning to increase advertising budgets.

Generally speaking, there is little paid advertising expended by the colleges for recruitment of students on the undergraduate level. Most of the money being spent at the present time is for development of special non-matriculated courses. An exception to this rule is the advertising that more than 40 per cent of the institutions place to attract summer students.

Of the 50 institutions in the survey that conduct paid advertising programs, 26 increased their advertising budgets, only five decreased their budgets, while 19 institutions kept the same budgets they had a year earlier. Direct mail, booklets, view books,

pamphlets and similar promotional material were not considered in this survey.

BREAKDOWN OF ANSWERS

A breakdown of the answers received indicates that the most popular—and apparently effective—areas of advertising, in decreasing order, are:

1. Promotion of evening, adult education, and extension courses—39 institutions.
2. Student recruitment—30 institutions.
3. Public relations (good will, promotion of school exhibits, etc.)—20 institutions.
4. Advertising of sports events—15 institutions.
5. Publicizing dances, shows and other campus activities—6 institutions.
6. Alumni fund raising—2 institutions.
7. No advertising at all—31 institutions.

Clearly, the reason for the popularity and effectiveness of evening, adult education, and extension course advertising is that specific courses and groups of courses are promoted. Hence, the reaction of the readers reached can be gauged by specific returns in terms of course enrollment.

In the case of institutional advertisements used for student recruitment, it is much more difficult to determine advertising effectiveness, since word-of-mouth information given by students or alumni to prospective students, "missionary" programs in high schools, and other factors enter the picture.

Many of the public relations directors pointed out that they make use of advertising of the institutional type to perform a dual, if overlapping, function: to promote community good will and to recruit students. In other

words, these two advertising goals are combined.

Reaction to the use of advertising for the recruitment of matriculated full-time students is mixed. Some public relations directors feel that good results are obtained. An equally large number, however, flatly doubt the value of such advertising, pointing out that where their institutions are continuing the practice it was only "because the other colleges are doing it." It would be logical to assume, therefore, that at least a portion of the institutional advertising done by colleges is a result of this keeping-up-with-the-Joneses psychology rather than from any deep-seated conviction in the power of institutional advertising to recruit students.

The survey also uncovered several cases in which the public relations directors frankly admit that the primary reason for advertising in local newspapers is to establish a more receptive climate for publicity releases. This is oftener true of institutions located in small towns and municipalities where one or two newspapers constitute the entire local press. While there is no doubt that public relations directors who make use of this polite form of bribery and thus perpetuate what can only be described as a vicious practice are in part responsible, it should not be overlooked that the activity is carried out with the complicity of the newspaper editors themselves. A number of public relations directors concerned report that they themselves are opposed to the practice. But they have no alternative, they assert with a note of helpless anger, in the face of pressure and implied threats on the parts of the local newspaper editors. The director of one southern university admitted

that this type of pressure was the primary cause of his institution's increased advertising budget.

In the case of advertising of campus sports events, dances and shows, no definite conclusions as to effectiveness have been reached. Again, as in the case of student recruitment, it is difficult to gauge reaction to advertisements placed in newspapers and other

publications in the face of complicating factors such as unpaid-for publicity through the college newspapers, local press, posters and other media.

Since alumni fund raising was cited as an advertising goal in only two instances, it was likewise impossible to make an extensive analysis of either the methods or advertising effectiveness in this area.

Colgate studies impact of

R. O. T. C. PROGRAMS

SIDNEY J. FRENCH

Chairman, R.O.T.C. Study Committee
Colgate University, Hamilton, N.Y.

THE PAST FEW YEARS HAVE BROUGHT a great many changes both in the number of R.O.T.C. units on college campuses and in the character of their programs. The net result is that colleges are faced with new curricular and extracurricular problems.

With the help of a financial grant from the Rockefeller Foundation a committee of the faculty at Colgate has undertaken the task of studying the impact of the R.O.T.C. programs on liberal arts education. The committee has tried to point up the chief problems that confront liberal arts education in adding military training to the regular academic pursuits.

The method of procedure has been to make a careful study of the situation as it has developed at Colgate University with the introduction of an air force R.O.T.C. unit in 1947. The study included, for example, classroom observation, questionnaires, scrutiny of text materials, and conferences with students and faculty. By visiting other campuses and employing questionnaires, the committee was convinced that Colgate's problem is not unique, but is fairly typical of those problems found in other colleges.

Although the study is incomplete, certain conclusions seem fairly evident. In the first place, the number of students enrolled in R.O.T.C. programs is increasing rapidly and those students now devote up to 20 per cent of their

time (the average is probably about 16 per cent) to R.O.T.C. subjects. Some of these subjects, such as political geography, have definite liberal arts value; others are so technical as not to contribute to a liberal arts program.

Reduction of the amount of liberal arts education is a serious matter in itself but becomes a particularly pressing problem in colleges such as Colgate that have a large unit of required work. The tendency has been to replace the students' elective hours to the extent of 20 additional required hours of R.O.T.C. work. The result may well be loss of those values that come from the traditional elective system.

CREDIT ALLOWANCES VARY

Other conclusions may be briefly stated. Not all of the R.O.T.C. work seems to be of college caliber, and the text materials are not of uniformly high standard. R.O.T.C. grades tend to run somewhat higher than college average. The teaching of R.O.T.C. subjects is, perforce, done by many persons with less pedagogical training and experience than is usually required for college teachers. There are wide discrepancies in the amount of credit allowed for R.O.T.C. courses by the various colleges.

In the light of these and other results of the study, and on the assumption that R.O.T.C. programs will be a continuing feature of liberal arts edu-

cation, the committee felt warranted in making the following recommendations in its preliminary report. They are offered with full appreciation of the progress already made by the air force in improving its program.

1. That both colleges and air force make a special effort to acquaint prospective students with the advantages and responsibilities of membership in an air force R.O.T.C. unit.

2. That college administrators, in cooperation with the air force, work through educational organizations to standardize the amount of academic credit for air science courses.

3. That the present commendable effort to achieve greater continuity and unity within air science courses and throughout the program be reinforced by the use of more comprehensive types of examinations.

4. That, coincident with the adoption of the proposed air force R.O.T.C. curriculum, continuing attention be directed to the preparation of adequate texts and teaching material, this material to be reviewed by competent authorities to assure that it is of college grade.

5. That the air force be encouraged to upgrade its R.O.T.C. teaching faculty by several means and that college administrators examine the qualifications and approve the appointments of the personnel proposed for assignment to their institutions, using criteria similar to those used for judging the rest of the college faculty.

6. That the colleges make every effort to relate the air force R.O.T.C. work to the rest of their educational program so that air science may become a more meaningful part of the total educational experience.

7. That, in view of the tightness of student programs imposed in part by the addition of the air force R.O.T.C. requirements, necessary modifications in both curriculum and overall requirements be made by reviewing the whole educational program, not by piecemeal methods.

It should be reemphasized that the present study is still incomplete and subject to revision in the light of further analysis. To make the continuing work as profitable as possible, criticisms and suggestions are solicited and will be greatly appreciated.

The committee is now broadening the base of its operation to study the various types of army, navy and air force programs and their impact on liberal arts education.

IN A RECENT ARTICLE IN THIS SERIES, the statement was made that the Revenue Act of 1950 marked a major milestone in the history of the tax problems of the colleges, since, for the first time, the general income of non-profit educational institutions was made subject, under certain conditions, to the federal income tax. It also was stated that the full implications of this legislation would not be realized until the courts had performed their traditional function of interpretation. Under our Anglo-American system of jurisprudence, Parliament, Congress, the provincial and state legislatures enact the laws but we review the written opinions of the judges to ascertain their full impact upon the lives and fortunes of the citizens.

Before college administrators can have any adequate concept of the meaning of the terms "Supplement U net income," "Supplement U lease rents" and "unrelated business net income" introduced into their vocabulary for the first time by the Revenue Act of 1950, we must have a substantial number of judicial decisions of record involving the application of the provisions of this legislation to specific situations.

Pending the accumulation of this case record, we must, of necessity, look to supplemental sources of information. The first of this source material is to be found in the deliberations of the congressional committees during the period the legislation was being drafted. The judges themselves frequently cite the published proceedings of the committee on ways and means of the House of Representatives and of the committee on finance of the Senate when they are called upon to construe the provisions of tax legislation. These proceedings will frequently throw valuable light on what the legislators had in mind in their wording of the statutory material.

For a better understanding of Supplement U of the current Internal Revenue Code, you are referred to the report of the Senate committee on finance dated Aug. 22, 1950.¹

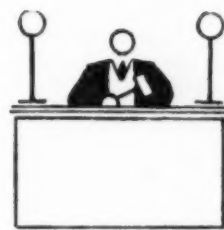
After the enactment of a law, the administrative division of government charged with its implementation and enforcement usually issues its own regulations, interpretations and rulings. Thus, in the case of federal tax legislation, we must look to the pub-

SUPPLEMENT U

NET INCOME

T. E. BLACKWELL

Vice Chancellor and Treasurer
Washington University, St. Louis



lished material issued by the Bureau of Internal Revenue. Prior to 1955, there was no official publication one could turn to for information on this vast bulk of administrative regulations and rulings. In that year Congress passed the Federal Register Act, making it mandatory for all federal administrative divisions to publish, first, their intention to issue such regulations and, second, after public hearings, the regulations in their final form. Until modified or reversed, either by court decision or by congressional action, these administrative regulations are part of the law of the land.

The *Federal Register* is published by the National Archives and Records Service and distributed by the Superintendent of Documents of the Government Printing Office. In the Jan. 8, 1952, issue, the Bureau of Internal Revenue served notice of its intention to issue regulations under the provisions of the revenue acts of 1950 and 1951 pertaining to the taxation of the unrelated business income of tax exempt organizations. After consideration of all such relevant matter as was presented by interested persons regarding the proposed rules, John B. Dunlap, commissioner of internal revenue, caused to be published in the Sept. 3, 1952, issue of the *Federal Register*² the regulations in their final form.

Since it will be possible, within the limitations of space of this article, to point out only two of the more salient features of these detailed regulations, you are urged to obtain a copy of this issue of the *Federal Register* and read the entire section cited.

Some years ago, a committee of university and college business officers, under the auspices of the American Council on Education, was successful

in persuading the commissioner of internal revenue to exempt the colleges from the necessity of preparing and submitting the rather complicated information return Form 990 on the grounds that institutions of higher education, unlike the majority of other nonprofit organizations, publish and distribute annual financial reports, available to the general public. All other nonprofit organizations and charitable trusts have been required to submit Form 990 annually. Now, however, the commissioner has decided to deprive the colleges of this immunity if they should chance to earn "unrelated business income." They must not only report and pay a tax on their unrelated business income, but they must also report all other income, in accordance with Form 990-T.

One aspect of these new regulations was considered of sufficient interest to corporate executives by the publishers of the magazine *Business Week* to justify an article in the Oct. 4, 1952, issue. This article was concerned with that section of the regulations providing for the taxation of certain types of sponsored research. Because of the importance of this problem to many of the colleges, this entire section³ is quoted herewith:

"(i) *Research.* (1) Income derived from research for the United States or any of its agencies or instrumentalities or a state or political subdivision thereof, and all deductions directly connected with such income, shall be excluded in computing unrelated business net income.

"(ii) In the case of a college, university or hospital, all income derived from research performed for any person and all deductions directly connected with such income shall be

¹U.S. Code Congressional Service 81st Congress, Second Session 1950, Vol. 2, Legislative History p. 5165.

²Vol. 17, No. 172, pp. 7966-7974.

³Para. 29. 422-1 (6) *Federal Register* Vol. 17, No. 172, p. 7970.

excluded in computing unrelated business net income.

"(iii) In the case of an organization operated primarily for the purpose of carrying on fundamental research (as distinguished from applied research) the results of which are freely available to the general public, all income derived from research performed for any person and all deductions directly connected with such income shall be excluded in computing unrelated business net income.

"(iv) For the purpose of this section, the term 'research' does not include activities of a type ordinarily carried on as an incident to commercial or industrial operations, for example, the ordinary testing or inspection of materials or products or the designing or construction of equipment, buildings, etc. The term 'fundamental research' does not include research carried on for the primary purpose of commercial or industrial application."

A business officer evaluates the

COLLEGE BOOKSTORE

TRENT C. ROOT

Controller, Southern Methodist University
Dallas, Tex.

IT HAS BEEN SAID THAT A GOOD bookstore manager will have the friendliness of a child, the docility of a lap dog, and the perseverance of a bill collector, the patience of an adoring wife, and the amiability of an idiot. Certainly the least that is expected of him is that he will please all of the people all of the time at a profit.

The manager operates under certain definite limitations. In most businesses the consumer sets the market. The merchant through better services, better merchandise, or better prices expects to expand the market either by taking business from competitors, or by increasing the total demand. The bookstore manager is appealing to a limited market and cannot increase the number of customers except as the enrollment of the university increases. Furthermore, most of the goods handled by the college store are purchased at the direction of the faculty. When one considers the fact that most of the sales are books on which the publisher sets the selling price and the discount, it becomes readily apparent that the bookstore operates within definite limitations.

From a paper presented at the National Association of College Stores, Miami, 1952.

Subject to these limitations, I think we should expect the bookstore to operate at a profit. I know of no other driving force that would bring out the best efforts of the manager. In our institution the profits from the bookstore go to the student union fund and become available for the use of all of the students of the university. I believe there is no conflict between the best interests of the faculty and the students and the profit motive. Profitable operation means better service to the students, less expense to the store, better trained employees, higher rate of stock turn, a better balance in inventories of salable merchandise, fewer credit losses, and increased total sales per student.

DESIGNED TO SERVE STUDENT

The student is the consumer that the bookstore is designed to serve. The fiscal policies of the bookstore should not be controlled by the students, but the students should have full knowledge of all of the operating policies of the store, such as original sale prices on books, return privileges, the repurchase of textbooks, and the credit policy of the store.

The matter of public relations is extremely important to all institutions

of higher learning and is especially important to privately supported institutions such as Southern Methodist University. The bookstore is the only place on the campus where all of the students are contacted repeatedly. It is the first contact that the student has with the manner in which the university operates. The possibilities of good will to the university through good bookstore operation are almost limitless. To the merchant good will means that the customer will return to the store for further purchases. To the university good will means that the student will try to bring his friends to the university and later that he will send his children there or give his money there.

It is a mistaken idea that an institution should try to curry favor with only those former students who have struck oil or married a rich widow. Students are human and reasonable and respond as readily to good treatment and good service as do their parents, and the bookstore has a special opportunity to build good will for the university.

Since the faculty controls a large part of the total purchases of the bookstore there is a wide field for the exercise of good management and good judgment in dealing with them. Special efforts should be made to make preferred customers out of faculty members, and in our bookstore we do a considerable amount of household appliance business as well as special purchases for faculty members.

The financial results of the bookstore are easy to evaluate through gross margin and net profit percentages and by comparison with national averages. The degree of cooperation with the faculty can be judged by the willingness of the faculty to furnish book lists to the bookstore and by the number of complaints received. The quality of the service to the student also can be judged by the number of complaints received since some members of any student body can be depended upon to be articulate if not vociferous in their criticism.

In my opinion the bookstore manager can be expected to give a professional performance in the operation of the store, professional in the sense that he assumes certain responsibilities along with his merchandising activities. He should be carefully chosen, well paid, and in complete charge of the operation within the policies set forth by the governing board.



The life and labors of an **INSTITUTIONAL ACCOUNTANT**

F. E. OLIVER

Chief Accountant, University of Michigan

INSTITUTIONAL ACCOUNTING IS A specialty that can challenge the interest of any young graduate accountant. The relatively recent awakening among educational institutions to the necessity of proper reporting has opened a new area of practice in the field of accounting. The complex nature of fund accounting, and its attendant responsibilities, also provides a valuable background of experience for the budding young administrator.

Following is a list of duties for institutional accountants. These duties are quite inclusive and are drawn up under the assumption that the institution is subject to extensive post-audit by outside parties. This list has also proved helpful in the construction of job specification manuals and in job classification studies.

1. *Monthly Accounting Reports.* Accounting reports, such as budget summaries, comparative reports of actual and estimated income, summaries of fund transactions, and summaries of operations for various areas or funds are prepared monthly. The figures for these reports are obtained from reconciliations, other summary reports previously prepared by the accounting staff, and detailed records prepared monthly from punched cards or other mechanized bookkeeping methods.

2. *Audits.* It is the responsibility of the accounting staff to maintain audits of departmental accounting for cash, ticket sales, and concession operations. Each petty cash fund is audited at least

once a year. Departmental ticket sales and major concession operations are subject to continuous audit. These audits are conducted to verify correct procedure in handling institutional funds and related documents and in checking on the integrity of employees.

3. *Reconciliations.* For purposes of internal accounting control, it is necessary to prepare reports of reconciliation occasionally. These reports are for the purpose of proving subsidiary accounts to control accounts, matching income from earning to income from billings, matching bank statements of cash to institutional records of cash, and various detailed listings to control totals.

4. *Contract Billings and Substantiating Reports.* Most contracts with the federal and state governments or other outside agencies in which funds are paid to the institution for services rendered require detailed billings in special form before funds can be transmitted or substantiating reports to prove proper expenditure of funds. Most contracts require the attention of an accountant to analyze book entries to prepare billings, owing to the diversified nature of the various contracts, billing forms, and report forms.

5. *Ledgers Kept by Hand.* Some ledgers, such as the land record, insurance register, endowment ledger, property ledger, contract ledger, and historical record, are kept by hand by an accountant because of the technical nature of the entries involved. Such

things as legal descriptions, abstract transactions, photographs, plat drawings, insurance policies, contracts, trust agreements, investment documents, and miscellaneous reports and records must be analyzed to maintain these records correctly. The volume and the nature of the entries for these records usually preclude the use of mechanized bookkeeping methods.

6. *Special Analyses, Distributions, and Adjusting and Closing Entries.* Special analyses and distributions are prepared by accountants if advanced knowledge of institutional accounting procedure is required or if complicated overhead or gain or loss computations are necessary. Preparation of periodic adjusting entries and annual closing entries also requires a technical knowledge of accounting procedure.

7. *Annual Financial Reports.* Sections of the worksheets for annual financial reports are assigned to each accountant for preparation, whereon records for the year are summarized and analyzed into correct account classifications. This task requires the technical knowledge of an accountant and experience in institutional accounting to achieve accurate reporting.

8. *Administrative Responsibilities.* On some occasions accountants perform administrative duties in tasks requiring the scheduling of services of several departments, supervision of publicity, supervision of crews of temporary employees, and the contacting of students, faculty and staff.

LIGHTING THE LABORATORY

How Wisconsin has overcome seeing handicaps

DEAC MARTIN
Cleveland

THE PRINCIPLES UTILIZED AND STEPS taken by Ludvig C. Larson, professor at the University of Wisconsin, to correct poor seeing conditions in a laboratory that inspects bovine blood samples for brucellosis infection are applicable in many college laboratories, general or specialized.

The recognition of brucellosis infection requires that work be done swiftly and accurately in handling samples at inspection tables illuminated from below. Professor Larson, who is director of the electrical standards laboratory at the university, found two principal handicaps to handling the screening tests upon glass plates at the rate of 500 to 800 samples per hour: Brightness contrasts were too great at the table, and direct and specular glare from windows and the lighting equipment were bad. In reporting his findings to the Illuminating Engineering Society, he wrote: "Laboratory tables and surrounding surfaces are usually either black or some other unfavorable color in sharp brightness contrasts with the hospital-white ceilings and walls."

The Illuminating Engineering Society recommends that contrasts within the field of vision should not exceed 10 to 1 limits and such contrasts as described by Professor Larson could well be 50 to 1 or much higher. As stated by Dr. Darell B. Harmon, Austin, Tex., authority on the psychophysiological and visually centered aspects of learning: "Every brightness area of major size within the field of vision should function to maintain the adaption level of the eyes as set by the critical seeing task."

SOLUTION AT TASK

"A special table (Fig. 1) was constructed which had a box or drawer containing three 15 watt T8 green flu-

orescent lamps. The drawer is 11½ feet in length, 4¾ inches deep, and 12 inches across. The table has a ¾ inch five-ply fir partition down the center making a separate production line on each side."

With this apparatus in use (Fig. 2) "blood samples have been given contrast against the illuminated box below them. The average brightness is about

100 foot-lamberts. Some technicians prefer lower values, and this is easily provided by turning off one of the three lamps in the box. Brightness of the area surrounding the illuminated drawer is about 40 foot-lamberts," which is well within the limits, and quite different from the surfaces of the old apparatus (Fig. 3) and its surroundings.

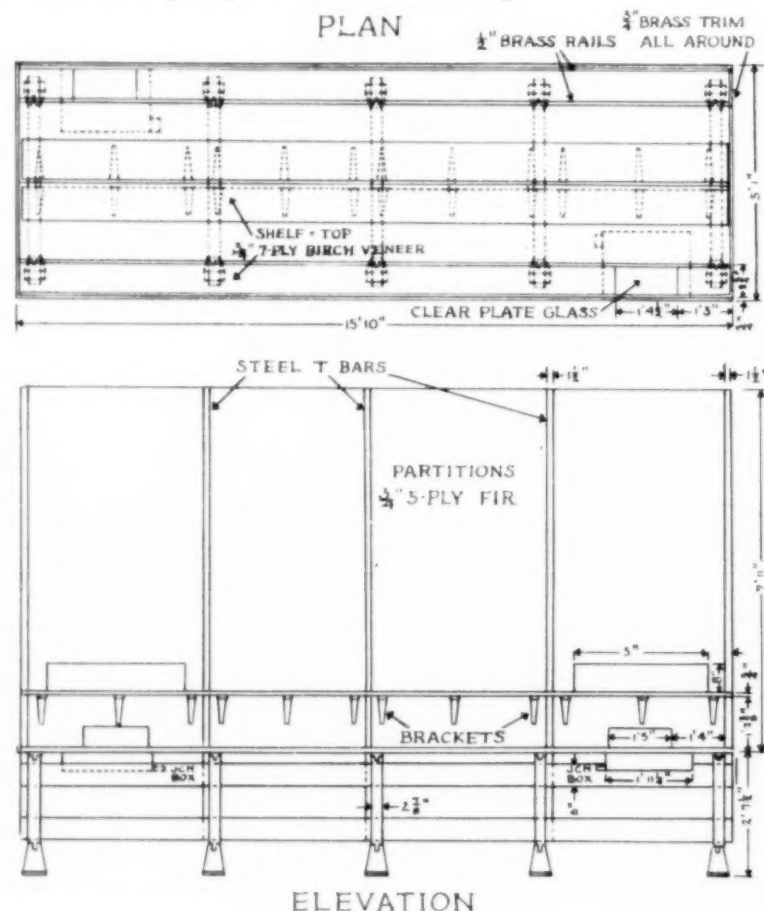


Fig. 1—Drawing of special laboratory worktable used in inspecting bovine blood samples for brucellosis infection at the University of Wisconsin.

¹Illuminating Engineering (July) 1951.
²The Co-ordinated Classroom, first edition 1949, pp. 37-38.

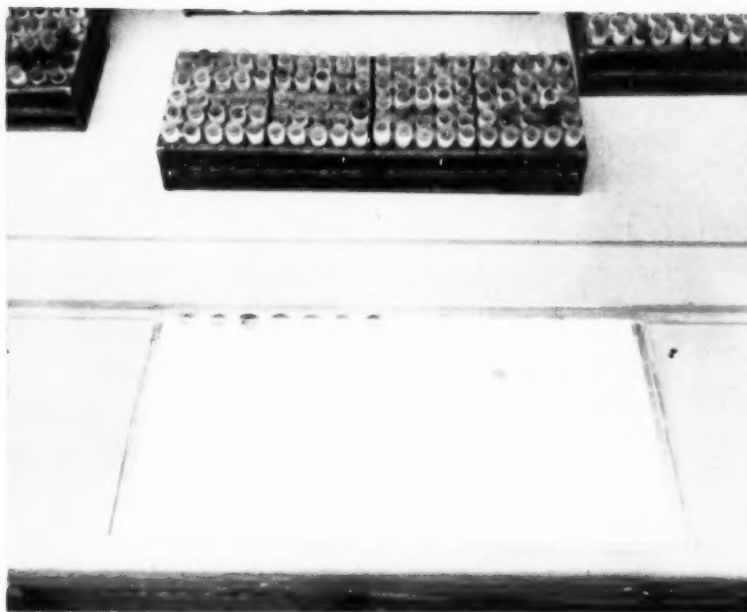


Fig. 2—Photograph shows how blood samples, with apparatus now in use, are given contrast against the illuminated box below them.

The conditions described here were aggravated, according to Mr. Larson, when "room luminaires and other light sources (such as windows) appear as reflected images upon the glass plates and interfere very seriously with seeing

the ruled-off squares and blood samples, especially when the samples must be applied at the rate of 4 or 5 per second."

This situation was brought under control by suspending luminous in-

direct lighting units from the ceiling (Fig. 4) with shielding so gauged in density that its brightness approximated that of the ceiling. This type of lighting projects 90 per cent of the light to the white ceiling, which then becomes a broad source of light. The remaining 10 per cent which comes downward through the plastic shields serves to bring the surface of the lighting units into close brightness ratios with the ceiling behind them. Such lighting tends to "fade" into the ceiling.

At the same time wall and other surfaces, such as tables and other equipment, were decorated in light tones to eliminate wide brightness contrasts within the field of vision. Since the photograph shown in Figure 4 was taken, the dark green curtains on the windows have been lightened to a brightness comparable with the pastel nonreflecting green of the laboratory table.

The combination of decoration with controlled luminous-indirect lighting has brought about a seeing condition in this laboratory comparable with the conditions in the "coordinated classrooms" developed to reduce the stresses induced by poorly designed furniture, by poor distribution of light, and by other adverse factors.



Fig. 3—Apparatus formerly used in laboratory. Room luminaires and other light sources interfered seriously with seeing the ruled-off squares and blood samples.



Fig. 4—Luminous indirect lighting units were suspended from the ceiling, and wall and other surfaces were decorated in light tones to eliminate brightness contrasts.

TOOLS FOR CONTROL OF FOOD COSTS

REQUISITION FORM

ALL ITEMS OF FOOD, WHETHER FROM "STORES" OR FROM the refrigerators (perishables) are issued by requisition. These requisitions are written by the supervisor or by department heads. After the requisitions have been filled they are sent to the accounting office for extending and recording in the case of "stores" items on the perpetual inventory. These daily issues form the basis for computing the daily food cost.

PERPETUAL INVENTORY FORMS
(See Opposite Page)

ALL FOOD ITEMS OTHER THAN THOSE PERISHABLE ITEMS received daily are recorded in a Perpetual Inventory which is set up in a visible file. Issues each day are deducted from the inventory. At the end of the month a physical inventory is taken to check discrepancies and to verify the cost of food on hand.

PURCHASE RECORD FORMS—PERISHABLES

SINCE DAILY DELIVERIES ARE RECEIVED ALL PERISHABLES are recorded only on a form called a Purchase Record. Perishables are used within two days of being received and the amount purchased is carefully estimated and controlled.

(Continued on Page 50)

ALTA B. ATKINSON
Manager of Food Service
Instructor in Home Economics
Teachers College, Columbia University
New York City

GOLDSMITH SPOR. N. Y.

VISIBLE SYSTEMS

PD 83480 BM 4-69

PURCHASE RECORD

CLASSIFICATION

DESCRIPTION

ITEM

DATE

ITEM
NO

AMOUNT

UNIT

TOTAL

COST

DATE

ITEM
NO

AMOUNT

UNIT

TOTAL

COST

DATE

ITEM
NO

AMOUNT

UNIT

TOTAL

TEACHERS COLLEGE, COLUMBIA UNIVERSITY
Food, Equipment, and Service for Special Activities

Organization _____ Address for Bill _____
Date of Activity _____ Time _____
Room(s) to be Used _____ Number of People Expected _____

FOOD TO BE PROVIDED BY THE CAFETERIA
(Kind) _____ (Quantity) _____

Time Food Should be Ready _____

SUPPLIES TO BE PROVIDED BY THE CAFETERIA

Tablecloth (number) _____ white paper napkins (number) _____
Candles (10¢ each) - Number _____ Color _____ Ice (amount) _____
(30¢ a bucket for chopped ice--about 50 lbs.)
Flowers (Type of Arrangement) _____
(Approximate Amount to be Spent) _____
Others _____

EQUIPMENT TO BE PROVIDED BY THE CAFETERIA (Please specify number requested)

Vase and Bulber _____	Coffee Urn _____	Lunch Bowl and Ladle _____	Ash Trays _____
Candlesticks _____	Dripolator _____	Plates _____	Dish Towels _____
Sugar and Cream Sets _____	Pitchers _____	Cups - (Glass) _____	Paper Doilies _____
Lemon Plate and Fork _____	Teakettle _____	Cups - (China) _____	Cake Knives _____
Hot Dishes _____	Large Kettle _____	Spoons (Paper) _____	Paring Knives _____
Tea Samovar _____	Cake Trays _____	Forks _____	Ice Pick _____
		Knives _____	
		(Other) _____	

MAID SERVICE

Unless special maid service is requested, food and equipment which have been ordered will be left in the serving kitchen. The key for both the Grace Dodge and 256 Thompson kitchen may be secured at the Teachers College Main Information Desk, and should be returned there after the event. The committee in charge will arrange the refreshment table for serving and afterwards should return all dishes and equipment to the kitchen. Dishes should be stacked and left in an orderly manner. Groups using the Grace Dodge Room on Saturday afternoon and evening will be responsible for washing the dishes and putting them away. Groups using 256 Thompson are to wash dishes and return them to the cupboard any day it is used unless they wish to pay for maid service to do this.

SPECIAL MAID SERVICE REQUESTED

Number of Maids _____ Duties of Maid (Please Check)
Time Maids are to Report _____

FREE: Mon-Fri. 9 a.m. - 6 p.m.	75¢ per hr.	_____ Set up refreshment table
Mon-Fri. After 6 p.m.	\$1.00 per hr.	_____ Prepare food in kitchen
Sat.-Sun. All Day	\$1.00 per hr.	_____ Do actual serving of food
		_____ Keep refreshment table supplied with food.

Will there be a committee from your group to supplement maid service? Yes _____ No _____
Check here if you wish to leave the dishes in the 256 Thompson kitchen for a maid to wash _____

For the use of the kitchen and equipment groups are charged \$2.00 up to 100 people, and \$2.50 over 100 people. There will be additional charges for special supplies as indicated, and for food and maid service.

Date _____ Signature _____ (for the organization) _____ (Telephone Number) _____
Signature _____ Executive Secretary of Student Organizations

SPECIAL FUNCTION FORMS

EACH SPECIAL FUNCTION OR CATERING OCCASION IS priced separately. Teas, buffets, receptions and food that is prepared to send out comes under the catering classification. Many student organizations request the use of the serving kitchen and equipment only. All reservations for this type of service and for food service are made through the student organization office and the requisition is signed by the person in charge and the head of the student organization office. Bills are rendered weekly.

*Restaurant Mayan
Rockefeller Center, N. Y.*

Sexton
Quality Foods



*Cafe Louis XIV
Rockefeller Center, N. Y.*

Ligh in the sky . . .

over 80 floors from the ground are nested these beautiful dining rooms operated by the Union News Company, combining elegant surroundings with a graceful pattern of service. Hors d'oeuvres have been associated with such service from time immemorial. That is why Sexton reaches to the Seven Seas to procure for a discriminating clientele the most delicious tuna, shrimp, lobster, sardines, anchovies, smoked oysters and caviar.

JOHN SEXTON & CO., CHICAGO, 1953

NEWS

Total Fall Enrollments Show Increase . . . V.A. Plans Some Changes in Organization . . . N.A.E.B. Purchasing Institute . . . Low Faculty Salaries Endanger Education . . . Urges Preparation of Employees for Retirement

U.S.O.E. Survey Shows 1.5 per Cent Increase in Fall Enrollments

WASHINGTON, D.C. — According to figures recently released by the Office of Education and summarized by the National Education Association, college enrollment in the fall totaled 2,148,000 full-time and part-time students, compared with 2,116,000 a year ago, an increase of 1.5 per cent. First-time students total 537,000, an increase of 13.7 per cent over the previous year's 472,000. Enrollment of men is down 1 per cent to 1,387,000; of women, up 6 per cent to 761,000. About 35 per cent of college students are women, although the number of women shows a steady rise since the war, it is still short of the prewar figure of 40 per cent. The increase in first-time students is greater for men than for women, 15.5 per cent for men, 11.2 per cent for women. Veterans still comprise a sizable portion of the male student body, about 17 per cent, but this represents a decrease of 40 per cent from the veteran enrollment of the fall of 1951. The figure does not include enrollment of Korean veterans, which was not covered in the survey. Relatively few Korean veterans were in college last fall, but the number is expected to increase substantially the second semester.

Total enrollment increased in 29 states with Utah, Florida and California showing the greatest gains. Forty-six states reported increases in first-time students; South Dakota's 41.7 per cent increase and Arizona's 39.4 per cent gain lead the states in this respect. The 10 largest institutions are N.Y.U., California, C.C.N.Y., Columbia, Illinois, Minnesota, Ohio State, Northwestern, Michigan and Indiana.

The substantial increase in enrollment in junior colleges is noteworthy.

The American Association of Junior Colleges reports that its survey of enrollment indicates that of the 294 returns thus far received, 69 institutions show decreases, 43 have no change, and 182 have increases, 68 of more than 20 per cent, with two junior colleges showing an increase of 100 per cent.

Offers Evaluation Aid on Foreign Students

NEW YORK CITY.—American colleges that lack facilities for evaluating the educational credentials of foreign students applying for admission may now call upon the office of university admissions at Columbia University for assistance.

The cooperative service is being rendered by Columbia because of the growing number of foreign students now enrolled in American institutions. During the 1951-52 academic year, more than 30,000 students from abroad were pursuing graduate and undergraduate studies, an increase of nearly 400 per cent in the last 30 years. Columbia University had 1600 students from abroad last year.

According to Columbia admissions officials, the university has been supplementing the work of the U.S. Office of Education for a year in evaluating foreign student credentials. Columbia has been rendering these services in the Middle Atlantic area on a temporary basis pending the establishment of an intercollegiate committee in this geographical area for this purpose.

In view of the magnitude of the wider task and the complexities involved in evaluating foreign records, interested college and university officials are asked to write in advance to David Lawson, Office of University Admissions, Columbia University, New York 27, N.Y., for full information as to the services the university is prepared to give.

Reports Bring Some Changes in V.A. Organizational Setup

WASHINGTON, D.C.—Carl R. Gray Jr., administrator of veterans affairs, recently announced plans for changes in the organization of the Veterans Administration based on extensive studies of the Booz, Allen and Hamilton report, of the Hoover Commission report, of the Trundle engineering report, and of recommendations that have been received from members of the Veterans Administration staff, from Congressional committees, from veterans' organizations, and from other interested parties.

In making this announcement, General Gray said the Booz, Allen and Hamilton report has been of assistance in arriving at a basic organization to increase efficiency, improve operations, and speed up service to veterans.

Some of the basic organizational principles laid down by Booz, Allen and Hamilton have been embodied in the organization to be initiated. General Gray said that the various reports he has studied support his own findings arrived at after visiting all of the hospitals, regional offices, and district offices of the Veterans Administration.

The reorganization is principally confined to the central office organization in Washington and to clarifying lines of authority and communication between the central office and the field.

General Gray declared that his findings are in substantial agreement with the Booz, Allen and Hamilton report insofar as it concerns the consolidation of all medical, hospital and related activities under the direct control of the chief medical director, who will be responsible to the administrator for this phase of the V.A. operation. He is also giving similar autonomy to the insurance operation under the direction of a deputy administrator for

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M. L. Stoepelwerth, President
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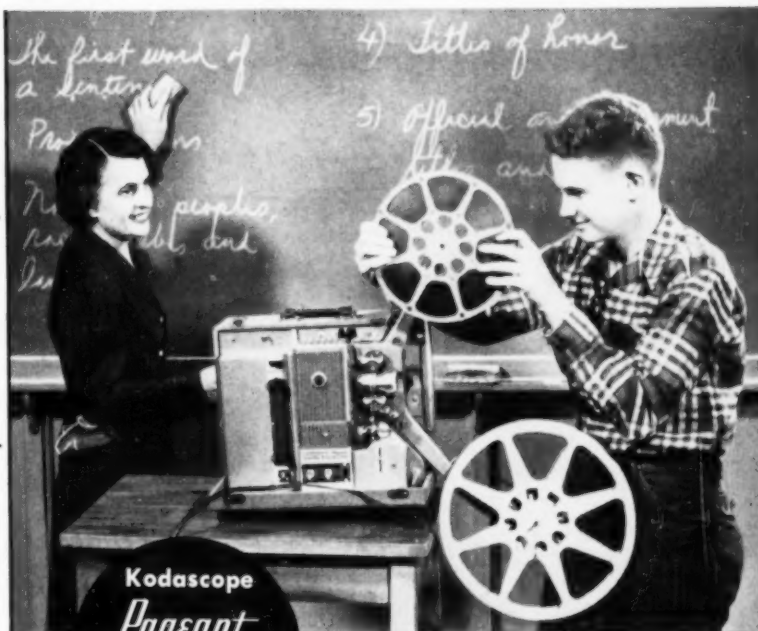


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NEWS

insurance. However, Booz, Allen and Hamilton strongly advised that medical control be decentralized into 20 medical centers, whose managers would be in charge of operations. V.A. vetoed this. Six area medical directors with no operating authority of their own will represent the chief medical director in the field.

Another area in which the new organization varies radically from the management consultant's report is the regional offices. The new organization

will retain the regional offices as one-stop service stations for veterans, as they exist today, with each office headed by a manager. The entire regional office structure will be consolidated under a deputy administrator for veterans benefits, who will be directly responsible to the administrator for all regional office activities and who will have a rounded staff to advise him and set policies for the various programs.

Booz, Allen and Hamilton proposed that regional office functions be sep-

arated and set up with each one as a separate bureau in a straight line of authority, headed by an assistant administrator in charge of the program, with his authority extending directly into the field. This would have resulted in claims being handled in 10 centers, geographically distributed, loan guaranty being handled in 12 centers, and vocational rehabilitation and education in 14 centers, each with its own geographical coverage.

The administrator pointed out that the new organization will provide him with complete staff service at central office but will reduce to three the number of operating officials reporting directly to him: the chief medical director, the deputy administrator for insurance, and the deputy administrator for veterans benefits (regional offices). Each of these operating officials will have within his department all staff and operating functions needed to make that department self-contained and will have full responsibility and authority for conduct of their functions.

Purchasing Institute Begins January 26

IOWA CITY, IOWA.—The fifth purchasing institute under the sponsorship of the National Association of Educational Buyers will begin on January 26 at the University of Iowa with an address by Fred W. Ambrose on the subject "What Educational Management Expects of Purchasing." Mr. Ambrose is secretary and business manager of the State University of Iowa.

Director for the five-day institute will be Bert C. Ahrens, executive secretary of the National Association of Educational Buyers.

The lectures during the institute will be presented by James J. Ritterskamp, purchasing agent of Washington University, and Ainsley G. Burks, purchasing agent of the State University of Iowa.

Sixteen major areas of purchasing procedure and policy will constitute the subject matter of the institute. Discussion periods of 30 to 45 minutes will be allocated for each of the subjects covered, and such discussion periods will be under the direction of Mr. Ahrens.

The institute will come to a close the afternoon of January 30 with the awarding of certificates.

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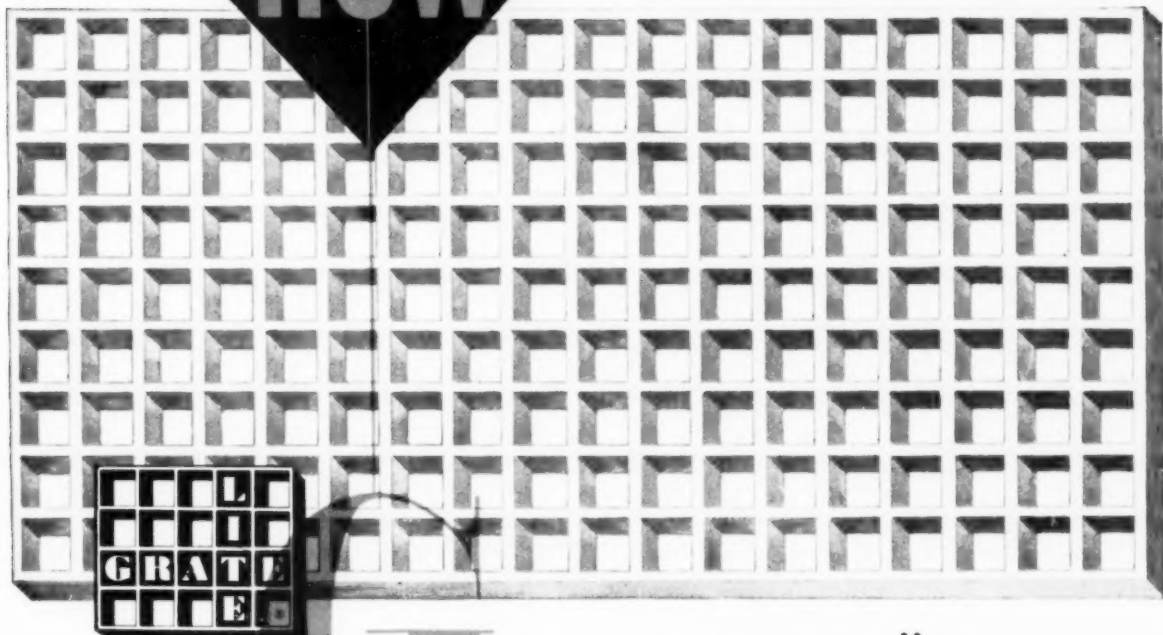
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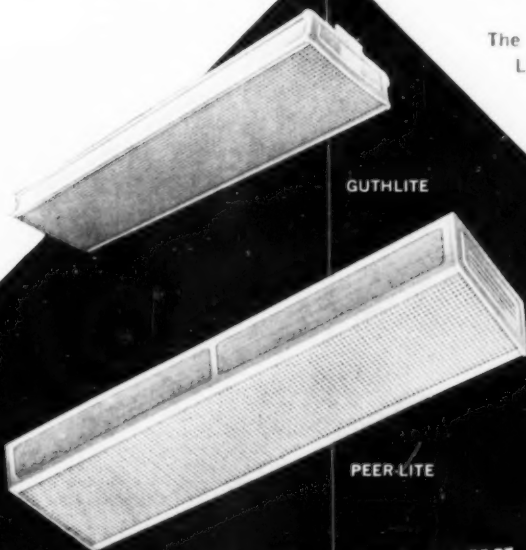
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NEWS.

"Education Endangered" by Low Faculty Salaries

KENT, OHIO.—Low salaries of college professors are endangering the future of education and the nation, Dr. George A. Bowman, president of Kent State University, warned recently. The only solution will come from public understanding of the need for greater financial support of higher education, he said.

"Within the last 10 or 12 years, the college professor has become the forgotten man in our economy. On the average, the professor today is 13 per cent less well off, before taxes, than he was in 1940, while the average American is 43 per cent better off."

Dr. Bowman said he will ask the Ohio legislature for a K.S.U. salary appropriation to cover a 25 per cent average salary increase for the two-year period beginning next July.

The Kent State president is president of the Ohio Inter-University Council, a voluntary organization of the six state universities. The group is now preparing the higher education budget request for the Ohio general assembly.

"The salary gap not only reveals a great injustice," Dr. Bowman continued, "but it threatens the whole future of education and the nation because we are unable to compete with government and industry for the services of able teachers for our classrooms and laboratories."

In the case of Kent State, he revealed that it will take at least a 16 per cent increase in the average faculty salary to restore the average real salary to where it was in 1939. At that time, he said, salaries at Kent were far below those of comparable institutions.

"Restoration is not enough," Dr. Bowman pointed out, "some measure of improvement must be provided."

Tells How to Prepare Employees for Retirement

NEW YORK CITY.—The nation's colleges are not properly preparing their staff members for retirement and the difficult adjustment it involves, according to George E. Johnson, vice president and general counsel of the Teachers Insurance & Annuity Association of America.

Mr. Johnson is a fellow of the Gerontological Society, Inc., and has



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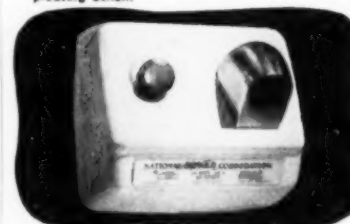


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NEWS

discussed pension problems on the programs of the American Management Association, the National Industrial Conference Board, the Municipal Finance Officers Association, and others.

Addressing the officers and trustees of T.L.A.A. at a recent meeting, Mr. Johnson said that pension counselors are now waking up to the realization that psychological as well as financial adjustments are essential to satisfactory retirement. However, it is up to

the colleges to help the individual make these adjustments easier, Mr. Johnson told the group.

"So little is being done today by the colleges that almost any suggestion for aiding staff members to adjust to life in the later years would be an improvement," he said, adding that the same is true in most other employments at present. To this end, Mr. Johnson suggested a four-point program for preretirement counseling by the colleges. He called education of

the staff members the single most significant step in helping them prepare for retirement. This education can be furnished through magazine articles pertaining to retirement; library books on retirement; pamphlets on health, hobbies, and other problems of later life, and courses of instruction in various means of adapting to old age, said Mr. Johnson.

An interview system also is helpful in preparing staff members and educators for their future retirement, he added. A schedule of five annual interviews with the counselor has been found helpful to the employee prior to the normal retirement date.

A third method, periodic medical checkup, is helpful in maintaining high health standards of college teachers and other employees, especially for the older men and women, Mr. Johnson declared.

Job replacement was the fourth point presented by Mr. Johnson. Many college staff members do not retire from production when they retire from a particular college, he said. Often they will take up part-time activities or write books, he noted. "There is a unique opportunity in the college world for a centralized placement bureau to help the older teachers get work, provided they want to continue active employment after retirement," Mr. Johnson told the T.L.A.A. trustees.



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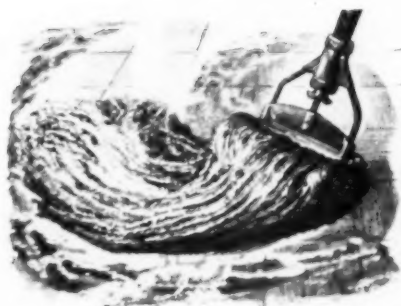
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Wesleyan Seeks Funds for Campus Expansion

MIDDLETOWN, CONN.—Dr. Victor L. Butterfield, president of Wesleyan University, recently announced that the college is undertaking a long-range \$8,000,000 development campaign.

Immediate goal of the drive is \$2,645,000 for campus improvements including a public affairs center, a college union, undergraduate dormitories, chapel and theater alterations, an auxiliary athletic field, and a music wing of a proposed auditorium. This is the first general building program at Wesleyan since the Twenties. At that time funds were raised for two science buildings, a residence hall and a library.

Dr. Clarence P. McClelland, retired president of MacMurray College in Jacksonville, Ill., has been named director of the development program. Dr. McClelland was graduated from Wesleyan in 1907.



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NEWS.

Enrollment Figures Higher Than Expected, Walters Survey Shows

CINCINNATI.—Thanks to an unexpected upsurge of freshmen of both sexes and "the academic persistence in the three upper years" of college women, fall enrollment in 830 approved universities and four-year colleges has not declined to the extent predicted, declares Dr. Raymond Walters, president of the University of Cincinnati, who has made an enrollment survey annually since 1919.

In the country's colleges and universities covered by Dr. Walters' study are 1,293,524 full-time students, only 1.5 per cent less than in 1951, and a grand total of 1,756,372. The 462,848 part-time students in the grand total represent a drop of 2.8 per cent from last year. (These figures are in slight variance with the official figures of the U.S. Office of Education as reported on page 52.)

"The full-time decrease is small when contrasted with the 1951 drop of 11.4 per cent from the figures for 1950," Dr. Walters states. Although June's high school graduation classes were smaller, a larger number of graduates entered college in September. As Dr. Walters puts it: "No one had predicted what came to pass in September," with 11.5 per cent more freshman men and 8.1 per cent more freshman women enrolling.

Looking for influences that stimulated high school graduates to enter college in increased numbers, Dr. Walters finds the answer in economic and war factors:

"Widespread publicity had been given to national needs and the opportunities afforded for young people trained in engineering, science, business, agriculture, teaching, nursing and other fields. A probable factor also is the current Selective Service policy of deferment from immediate military drafting of those young men who do good work in college."

Dr. Walters, showing how five fields of freshman study reflect current economic demands, reports that engineering has 32.7 per cent more freshman men and 34.5 per cent more freshman women; teachers colleges, 10 per cent more freshman men and 7.3 per cent more freshman women; commerce and business administration, 8.3 per cent more freshman men and 19.6 per cent



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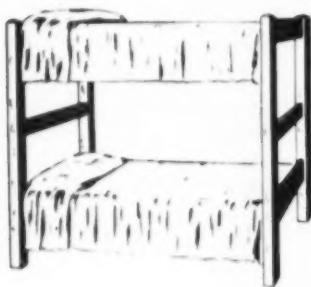


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NEWS.

more freshman women; agriculture, 8 per cent more freshman men and 11.7 per cent more freshman women; arts and sciences, 5.5 per cent more freshman men and 7.1 per cent more freshman women.

Only a "tiny fraction" of present freshmen are Korean war veterans.

Dr. Walters accounts for the fact that women full-time students actually show a gain of 1.5 per cent in contrast to a 2.9 per cent decrease in full-time men by saying the decline in men is probably due to last June's graduation of so many G.I. veterans, whereas "the academic persistence of women determined to attain collegiate degrees" has kept them in college.

Analyzing full-time enrollments by types of institutions, Dr. Walters reports universities under public control have 1.8 per cent less men, 2 per cent more women, and 0.7 per cent less of both; universities under private control, 6.7 per cent less men, 1.8 per cent more women, and 4.8 per cent less of both; independent arts and sciences colleges, 2.7 per cent less men, 1.4 per cent more women, and 0.9 per cent less of both; independent technology schools, 0.6 per cent more men, 2.1 per cent more women, and 0.8 per cent more of both; independent teachers colleges, 1.2 per cent less men, 0.1 per cent more women, and 0.5 per cent less of both.

In full-time totals, the 10 largest institutions reporting to Dr. Walters are: California, 33,770; Illinois, 18,592; Minnesota, 18,406; Michigan, 17,002; Ohio State, 16,410; Wisconsin, 15,626; New York, 15,509; Texas, 13,932; Michigan State, 12,402; Washington (Seattle), 12,249.

In grand totals—all but one of the top four are in New York City—the 10 largest are: New York University, 41,307; California, 33,770; New York City College, 29,674; Columbia, 25,119; Illinois, 22,231; Minnesota, 21,993; Boston, 21,773; University of Michigan, 19,885; Ohio State, 18,688; Wisconsin, 18,455.

Rochester Opens Double Financial Campaign

ROCHESTER, N.Y. — The 102 year-old University of Rochester recently launched a two-pronged fund raising campaign, its first in 28 years, to obtain \$10,700,000 for immediate objectives and \$36,000,000 additional in

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NEWS

the next 10 years for long-range educational and research goals.

Initial emphasis will be a joint three-year effort by the college of arts and science, the graduate school, and the university school of liberal and applied studies (evening extension program) to raise \$10,700,000 in new endowment or assured annual support, Dr. Cornelis W. de Kiewert, the university's fifth president, announced.

Linked closely with this special drive, in which individuals and industrial and

business companies in the Rochester area will be asked to give financial support to the university, and beginning at the same time, will be 10 year development programs of the university's other schools and colleges, including the school of medicine and dentistry, the Eastman School of Music, and memorial art gallery, as well as those of the arts college, graduate school and university school.

A general fund raising drive is tentatively planned for next fall.

Starting Salaries High for Engineering Grads

NEW YORK CITY.—Starting salaries for 1952 engineering graduates of New York University averaged 9 per cent higher than those for 1951 graduates, with approximately three-fourths of the engineers (75 per cent) entering the employ of private industry.

These figures were reported recently by John A. Hill, assistant dean of the college of engineering, who conducted an employment survey of last year's class. The average monthly starting salary in 1952 was \$328, the survey disclosed, and the range went from \$250 to \$425.

Dean Hill pointed out that the upward step continued a trend which in each of the last six years except 1949 has produced significant annual increases. Current starting salaries average 45 per cent higher than those of 1947.

"The highest average salaries in 1952 were in the fields of aeronautical engineering, mechanical engineering, and industrial engineering," Dean Hill stated. "The fields with the highest average salaries vary from year to year, however. Our surveys have not indicated that any one field is favored over others on a continuing basis."

The number of graduates entering civil service jobs dropped appreciably from 1951 (16 per cent) to 1952 (7 per cent).



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Many at Notre Dame Earn Own Way

NOTRE DAME, IND.—One out of every seven undergraduate students at Notre Dame is working his way through college. Seven hundred students work an average of 12 hours each week and earn up to 25 per cent of their tuition, according to the latest figures on student employment. Business and industrial organizations in near-by South Bend also employ a number of students in a variety of full-time or part-time jobs.

Giving students an opportunity to work for their education has been a tradition at Notre Dame for more than a hundred years. Student jobs range from operating motion picture projectors to hunting bird specimens for the biology department. Many students serve as night watchmen in the 50 buildings on the campus, as editors

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Johns-Manville FIBRETONE offers an acoustical ceiling which is highly efficient and modest in cost. It consists of 12" square panels of sound-absorbing materials in which hundreds of small holes have been drilled. These holes act

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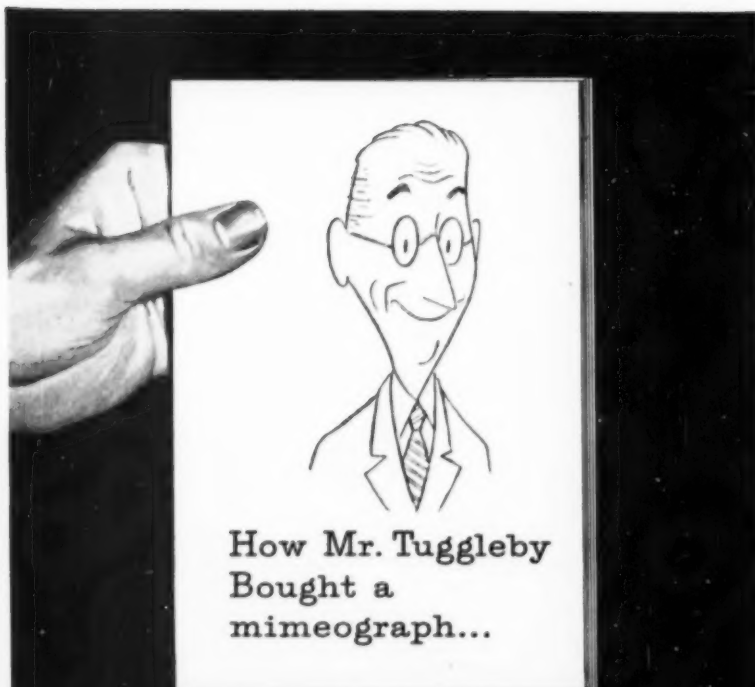
For a complete survey by a J-M acoustical expert, or for a free book entitled "Sound Control," write Johns-Manville, Box 158, Dept. N.S., New York 16, N. Y. In Canada, write 199 Bay Street, Toronto 1, Ontario.

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NEWS.

and photographers of student publications, as campus mail carriers, and as life guards in the swimming pool.

In spite of the high level of student employment there are always more applicants than there are jobs on the campus each year at Notre Dame. Students are selected for campus employment on the basis of character, conduct, financial need, and scholastic achievement, according to F. E. Freeman, university personnel director. "A breach of discipline or a marked drop in academic standing disqualifies a student for employment," Mr. Freeman added.

College Health Officers Now Have Journal

ITHACA, N.Y.—The first number of a journal devoted to the medical care of America's 2,000,000 college students has been issued at Cornell University.

Student Medicine will be published biennially by the university's department of clinical and preventive medicine. As an information medium for college health officers, it hopes "to stimulate discussion and reevaluation of such policies as now dominate the practice of student medicine."

"People of college age have patterns of illness which have different, but just as characteristic, groups of symptoms and signs as medical disorders occurring in other age groups," the journal comments in an editorial foreword.

"Better communication between [college] physicians and their colleagues in other institutions would aid greatly in dissemination of information of mutual interest and thereby help improve the quality of student medicine."

Dr. Ralph Alexander is editor of the new publication.

Volume on Legal Problems

ST. LOUIS. — The third edition of "Current Legal Problems of Colleges and Universities: 1951-52" has been completed, according to Dr. Thomas E. Blackwell, vice chancellor of Washington University. Dr. Blackwell, a member of the editorial advisory board of *COLLEGE AND UNIVERSITY BUSINESS* and author of the articles dealing with legal problems of colleges that appear monthly in this magazine, has assembled the articles into a single volume for easy reference.

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NEWS

NAMES IN THE NEWS



Grayson Kirk

Dr. Grayson Kirk, acting president of Columbia University since December 1950, when **Gen. Eisenhower** went on leave, has been named president of the university. The appointment will be effective on January 19, when Gen. Eisenhower's resignation becomes official. Dr. Kirk joined the Columbia faculty in 1940 as an associate professor of international relations.

John W. Nason, president of Swarthmore College since 1940, resigned recently in order to accept appointment as president of the Foreign Policy Association, Inc., New York City. Dr. Nason, who succeeded **Brooks Emeny**, president of the association since 1947, began his new duties on January 1 on a part-time basis until a new president of Swarthmore is named.

William A. Spencer, assistant director of public relations at Armour Research Foundation in Chicago, has been appointed director of the office of information services at New York University, replacing **John W. S. Ord**.

Harry W. Manley, supervising accountant in the internal auditing division of the University of Illinois, resigned December 31. He is rejoining the firm of Ernst and Ernst, certified public accountants, where he will become senior consultant on the firm's management consulting staff.

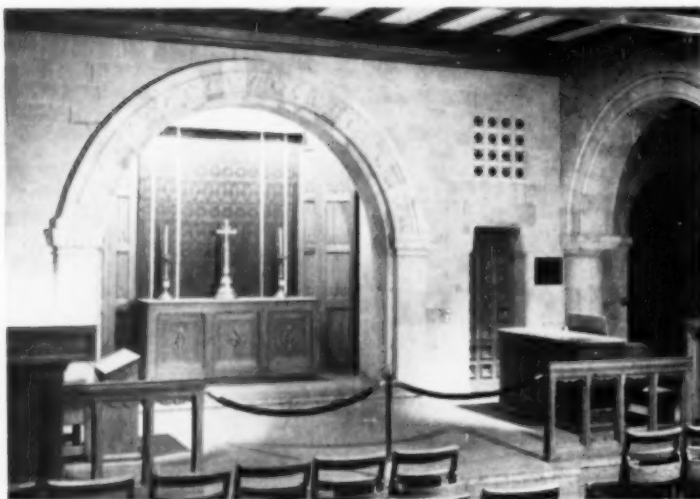


Harry W. Manley

Calvin J. Haugh, business manager of Hollins College since 1948, has resigned to accept the position of assistant to the president of The Homestead at Hot Springs, Va. The resignation becomes effective in April. **Willard N. James**, vice president, has been named vice president and treasurer, as of April 1. Mr. James had served as business manager from 1942 until 1948.

Harlan Cain, with nine years' experience with a wholesale food company and two years with a retail establishment, has been made director of auxiliary enterprises at the University of

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Dedicated to four Army chaplains, two Protestant, one Jewish and one Catholic, who, on a sinking troopship gave their life-jackets that others might live, the chapel is an eternal, living memorial to the brotherhood of man.



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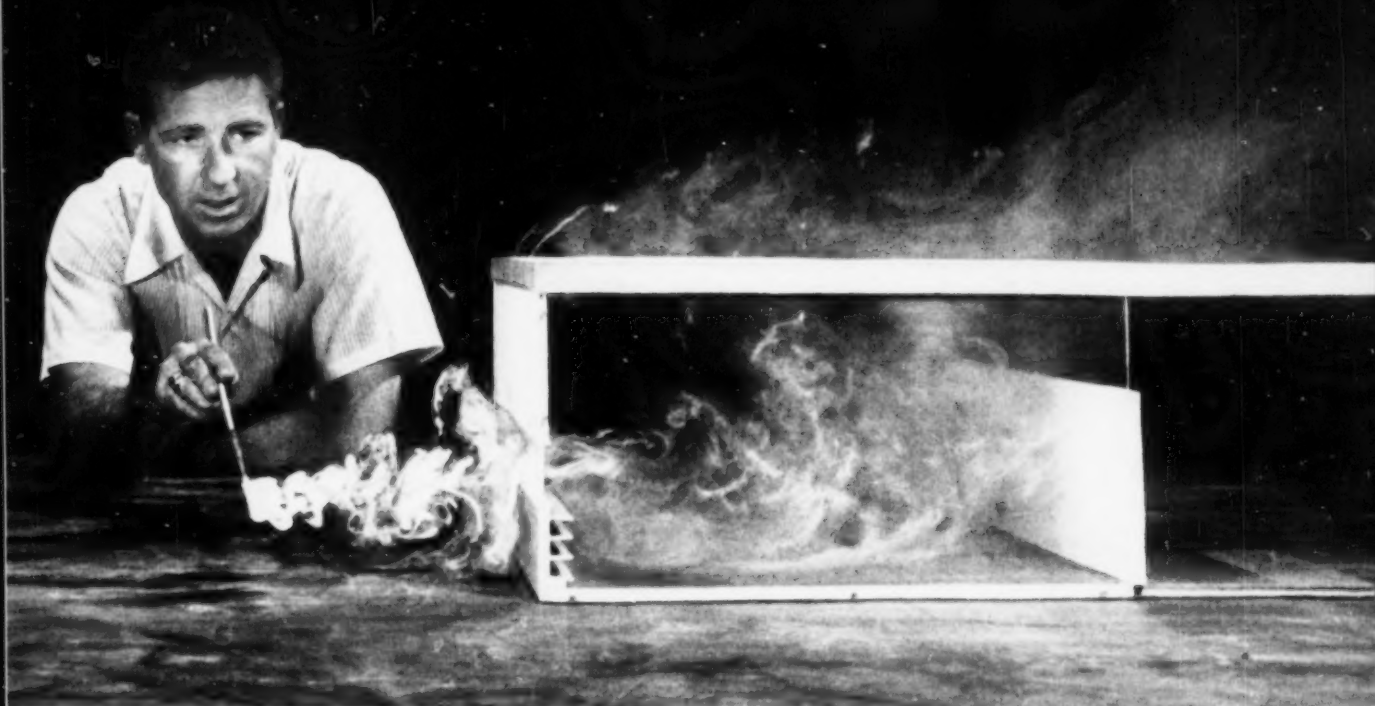


Harvey Vogler

Omaha. He will have administrative supervision of all food services, the bookstore, the student center, and the stenographic bureau. Another addition to the business staff at Omaha is **Harvey Vogler**, who has been appointed business manager of athletics. Mr. Vogler has been serving as deputy sheriff of Saunders County, Nebraska, during which time he was manager of American Legion baseball.

Howard R. Taylor Jr. has been named vice president in charge of development at Fenn College, Cleveland. He is the first vice president in the history of the college and will be responsible for the over-all development of Fenn's physical plant, faculty and curriculum and will have supervisory responsibilities in connection with public relations, alumni relations, and financial support.

Jean Paul Mather, staff associate and assistant treasurer of the American Council on Education, has been named



Introducing smoke into the schoolroom model to make air flow visible.
Ronald Chatham photo

VENTILATION GOES TO SCHOOL

Texas Engineering Experiment Station tests show what kinds of windows and window detailing provide the best warm-weather ventilation

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pattern throughout the room . . . how, with proper design, schoolrooms can be made comfortable—even in hot weather.

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NEWS

to the new position of provost at the University of Massachusetts, according to a recent announcement by **President Ralph A. Van Meter**. The new provost will assume his duties in February.



J. H. Kreinheder

John H. Kreinheder, superintendent of buildings and grounds at Middlebury College, Middlebury, Vt., has resigned to accept appointment as superintendent of buildings and grounds at Wellesley College. He will be succeeded at Middlebury by **F. Dudley Chaffee**, who since 1946 has been assistant business manager and superintendent of buildings and grounds at Springfield College in Massachusetts. Chaffee will join the Middlebury staff on February 1.

David Blair Owen, president of Bradley University, Peoria, Ill., resigned recently for reasons of health. He received an indefinite leave of absence November 21 but later submitted his resignation stating that he planned to enter some "activity with less pressure."

David F. Watson, purchasing agent of the University of Chicago since 1933, has announced his retirement on February 1. He will be succeeded by **Leonard W. Erickson**, who first joined the university staff as manager of Midway properties of the university in 1929. Later he became assistant director of residence halls and commons and assistant business manager. Mr. Watson, before joining the university



David Watson



L. W. Erickson

staff 20 years ago, had been vice president and sales manager of the Illinois Western Coal Company and prior to that time purchasing agent of the Plankinton Packing Company of Milwaukee. Mr. Watson has for many years been a member of the board of directors of the Educational and Institutional Cooperative, Inc., and was its president for seven years.

H. Geary Hudson, president of Illinois College, Jacksonville, Ill., recently announced at a meeting of the college trustees that he plans to retire on July 1. Dr. Hudson, eighth president of the college since its founding in 1829, has been the chief executive of the institution since 1937.

Evan Walden, superintendent of buildings and grounds at Graceland College for 23 years, has resigned to accept appointment as superintendent of buildings and grounds at Drake University. At Drake, Mr. Walden will be succeeding **LeRoss Morris**, who recently resigned to accept a similar position at Denison University in Granville, Ohio.

John R. McCurdy, general secretary of the Y.M.C.A. metropolitan board of governors of Toronto, Ont., has accepted appointment to the presidency of George Williams College in Chicago and will take office July 1 when he succeeds **Dr. Harold C. Coffman**, who will retire at that time.

Nils Y. Wessell, vice president of Tufts College, Medford, Mass., was recently made acting president until a successor to **President Leonard Carmichael** can be named. Dr. Carmichael resigned recently to become head of the Smithsonian Institution in Washington.

Elmer Francis Haight, head of the department of religion at Furman University, has been named to succeed **Annie D. Denmark** as president of the institution at the close of the academic year.

Harvey Nathaniel Davis, third president of Stevens Institute of Technology, died recently at 71 years of age. He had retired in 1951 as president of the Hoboken, N.J., institution.

Ernest H. Hahne, president of Miami University, Oxford, Ohio, since 1946, died recently at 62 years of age after a long illness. He had once been a professor of economics at Northwestern University.

George Washington Rightmire, president of Ohio State University from 1926 until his retirement in 1938, died December 24 in Columbus at 84 years of age. The son of a Lawrence County foundryman, Dr. Rightmire rose from humble surroundings to the top educational post in the state.

Bowman F. Ashe, president of the University of Miami, Coral Gables, Fla., since it was founded 26 years ago, died recently after a six weeks' illness. He was 67 years old.

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National Federation of College and University Business Officer Associations

President: Jamie R. Anthony, Georgia Institute of Technology; vice president: C. C. De Long, University of Illinois; secretary-treasurer: Irwin K. French, Wellesley College.

Association of College Unions

President: Charles D. Owens, University of Washington; secretary-treasurer: Edgar

A. Whiting, Cornell University; editor of publication: Porter Butts, University of Wisconsin.

Conference: April 16-19, Claremont Hotel, Berkeley, Calif.

National Association of Educational Buyers

President: Kermit A. Jacobson, California Institute of Technology; executive secretary: Bert C. Ahrens, 1461 Franklin Ave., Garden City, N.Y.

Association of College and University Business Officers

American Association

President: J. R. E. Lee Jr., Florida A. & M. College; secretary: L. H. Foster Jr., Tuskegee Institute.

Convention: May 3-5, Fort Valley State College, Fort Valley, Ga.

Central Association

President: Bruce Pollock, Carleton College; secretary-treasurer: C. C. De Long, University of Illinois.

Convention: May 3-5, Minneapolis.

Eastern Association

President: F. Morris Cochran, Brown University; secretary-treasurer: Irwin K. French, Wellesley College.

Convention: Dec. 5-7, Washington, D.C.

Southern Association

President: Frank D. Peterson, University of Kentucky; secretary-treasurer: Gerald D. Henderson, Vanderbilt University.

Convention: April 9-11, University of Florida, Gainesville.

Western Association

President: Robert W. Fenix, Willamette University; secretary-treasurer: William Miliken, St. Mary's College of California.

Convention: May 10-12, Empress Hotel, Victoria, B.C., Can.

American College Public Relations Association

President: Edward P. Vonderhaar, Xavier University, Cincinnati.

Convention: 1953, Salt Lake City.

Association of Physical Plant Administrators of Universities and Colleges

President: Edward Pardon, University of Michigan; secretary-treasurer: A. F. Gallistel, University of Wisconsin.

Convention: May 11-13, Alabama Polytechnic Institute, Auburn, Ala.

National Association of College Stores

President: H. R. Ritchie, University of North Carolina Book Exchange, Chapel Hill; executive secretary: Russell Reynolds, Box 58, 33 West College Street, Oberlin, Ohio.

Convention: April 19-22, Statler Hotel, New York City.

College and University Personnel Association

President: Hedwin Anderson, University of Minnesota; secretary-treasurer: Clara Stimson, University of Rochester; executive secretary: Donald E. Dickason, University of Illinois. Permanent headquarters, 809 S. Wright St., Champaign, Ill.

Convention: July 1953, Michigan State College, East Lansing.

National Association of College and University Housing Officers

President: Kenneth D. Lawson, Michigan State College; vice president: M. R. Shaw, Cornell University; secretary-treasurer: Ruth N. Donnelly, University of California, Berkeley.

Convention: August, University of Minnesota.

CLASSIFIED ADVERTISING

POSITIONS OPEN

Bookstore Manager. Position available July 1, 1953, with privately endowed eastern university; responsibility for complete operation of university store with present volume of \$175,000; in reply give personal data, resume of training and experience, salary expected. Write Box CO 106, COLLEGE AND UNIVERSITY BUSINESS.

Food Service Director. Position in Student Union of a private midwestern university with enrollment of about 7,000 students; to supervise food production and service in all dining units, and food service personnel including cafeteria manager and grill manager; to organize, establish, and take complete charge of all catering operations; in reply, state age, education, experience, special qualifications, personal data. Write Box CO 104, COLLEGE AND UNIVERSITY BUSINESS.

Food Service Manager. Ohio college operating a dining hall serving 350 residents with supplementary service for non-resident students, needs a person to take full charge of kitchen and dining service including planning of menus, purchasing of food, hiring and supervision of help; in reply give full data, personal, training, experience, references, and photograph. Write Box CO 103, COLLEGE AND UNIVERSITY BUSINESS.

Plant Superintendent. New York metropolitan college; Mechanical Engineering Degree required; experience in building construction and maintenance; send complete resume of training and professional experience, personal data, and salary expected. Write Box CO 96, COLLEGE AND UNIVERSITY BUSINESS.

Salesman. Established firm in college, university, and contract wood furniture business seeking man to sell its products for dormitories, dining rooms, and lounges; territory: Central States. Kindly submit complete qualifications to: Box CO 97, COLLEGE AND UNIVERSITY BUSINESS.

Superintendent of Buildings and Grounds. Established New England college of 1,000 students; this position requires maintenance,

purchasing, supervisory, engineering and construction experience. Write Box CO 105, COLLEGE AND UNIVERSITY BUSINESS.

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Accountant. B.S.; desires responsible position, college, university business office; preferably vicinity West Virginia or bordering states; desires opportunity for graduate study; draft exempt; five years diversified accounting experience; institutional and industrial, standard cost system; will relocate. Write Box CW 129, COLLEGE AND UNIVERSITY BUSINESS.

Business Manager or Accountant. Age 29; married; expect M.S. in Accountancy in June 1953; two summers at University of Omaha Business Manager's Workshop; four years' experience as chief accountant at a private endowed college; also experience in auditing division at large state university; good references. Write Box CW 128, COLLEGE AND UNIVERSITY BUSINESS.

Food Service Director. Position wanted in larger university; five years' experience as college food director, of an enrollment of eighteen hundred and boarders of two hundred and fifty; two years at a state institution, feeding three thousand; commissary steward four years; graduate of Cooks & Bakers School; two years with B.A.; age thirty five; dependable & honest; would like change; prefer west coast, but will consider anywhere; can furnish good recommendations. Write Box CW 102, COLLEGE AND UNIVERSITY BUSINESS.

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The rates for classified advertisements are: 10 cents a word; minimum charge, \$2.50.

Forms close 25th of month preceding date of issue.

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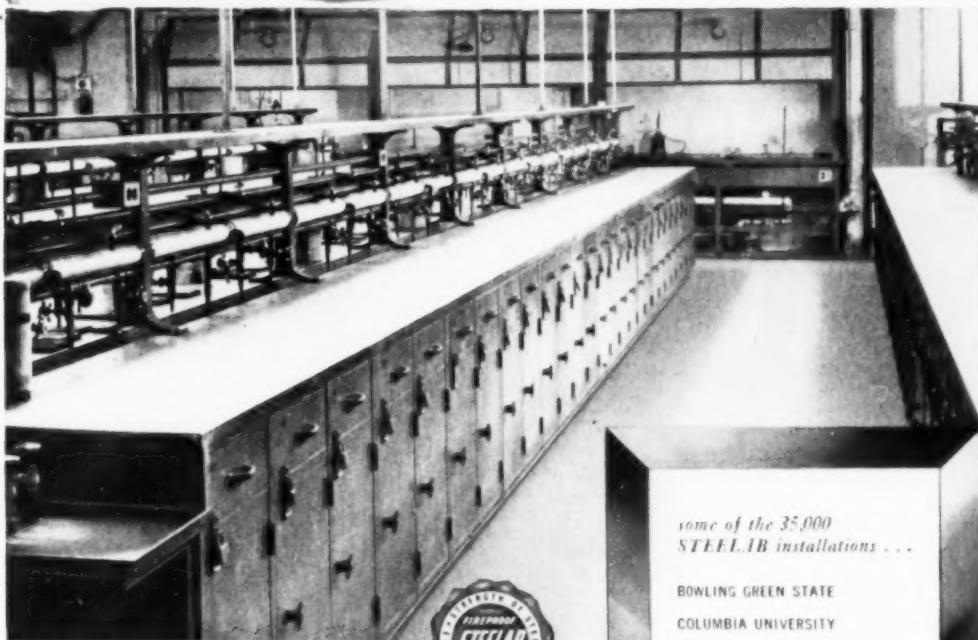
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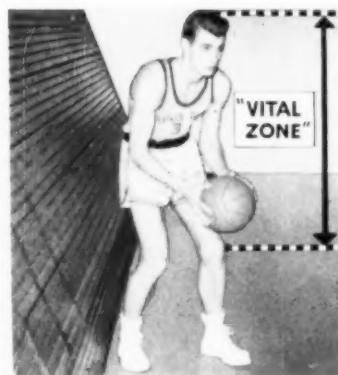
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WHAT'S NEW

January 1953

Edited by Bessie Covert

TO HELP you get more information quickly on the new products described in this section, we have provided the postage paid card opposite page 88. Circle the key numbers on the card which correspond with the numbers at the close of each descriptive item in which you are interested. COLLEGE and UNIVERSITY BUSINESS will send your requests to the manufacturers. If you wish other product information, just write us and we shall make every effort to supply it.

GrateLite Louver-Diffuser

A new louver diffuser, known as GrateLite, has been produced in a modern design to complement modern fluorescent fixtures and tubes. It is an integral



plastic louver for fluorescent lighting which allows as much light to pass through as diffusing glassware. It improves the quality of light and provides low apparent brightness because of the lattice like pattern. The small open cubical facets form a modern, functional design. GrateLite is molded of Lutrex styrene and makes a permanent installation which is easy to maintain. It can be cleaned quickly with liquid detergents. The plastic is light weight and color-stabilized and retains its shape indefinitely. The surface is de-staticized so that dust and bugs fall through the grid openings. Edwin F. Guth Co., Dept. CUB, 2615 Washington Ave., St. Louis 3, Mo. (Key No. 480)

Pocket Magnifier

A new 10 power magnifier with a built in light source can be clipped to the pocket like a fountain pen. The inexpensive magnifier uses two penlight batteries and bulb for illuminating the object and is designed for reading micrometer and other fine scales and for laboratory use. It weighs only two and one-half ounces, including batteries, and employs a unique lens construction which allows the light to go directly through the lens and onto the object, without any direct light reaching the user's eye. Bausch & Lomb Optical Co., Dept. CUB, 42 East Ave., Rochester, N. Y. (Key No. 481)

Liquid Detergent

Franklin's Liquid Detergent is a new concentrated multi-action cleaner for floors, walls and painted surfaces. It is safe for all cleaning since it contains

no harmful abrasives, harsh alkalis or acids. No scrubbing is required when using the new detergent as the cleaning ingredients go into the pores and promptly dissolve soluble matter. Oily and greasy soil is quickly emulsified and dirt and grit are loosened and suspended for easy removal.

The new cleaner works equally well in hard or soft, hot or cold water. It leaves a pleasant aroma after cleaning and removes odors at their source. It can be used on all types of floors as well as painted walls, trim and woodwork and other difficult cleaning jobs. One gallon of Franklin's Liquid Detergent makes up to forty gallons of efficient cleaning solution. Franklin Research Co., Dept. CUB, 5134 Lancaster Ave., Philadelphia 31, Pa. (Key No. 482)

Cellar Drainer

A new type of cellar drainer or sump pump for draining boiler rooms and other low areas has recently been introduced. The motor and operating switch are completely enclosed in a stainless steel housing. Should the electrical power fail, the housing allows the pump to be completely submerged without damage to the motor. It also functions as a float to control the pump operation.

The unit is easily installed by connecting the discharge piping and plugging in the electric cord. The operating range is set at the factory and no float adjustment is necessary. Fairbanks, Morse & Co., Dept. CUB, 600 S. Michigan Ave., Chicago 5. (Key No. 483)

Soundstripe Service

Bell and Howell's new Soundstripe can be applied to silent films at a very low cost, permitting them to be converted directly to sound. With the new Soundstripe service it is no longer necessary to make a copy of the silent movie on a film perforated along only one edge. The new development permits the magnetic recording and playback of sound directly on standard silent film, perforated along both of its edges. The silent film exposed in all types of 16 mm. motion picture cameras can be striped for magnetic sound. Bell & Howell Co., Dept. CUB, 7100 McCormick Rd., Chicago 45. (Key No. 484)

Boiler-Burner Units

A new line of completely integrated, compact boiler burner units has been developed by Kewanee Ross Corporation and Iron Fireman Manufacturing Company. Each unit consists of an Iron Fireman packaged burner complete with all controls, and a Kewanee Scotch boiler, completely assembled with its accessory equipment for oil, or oil and gas, or gas firing. These boiler burner units are available for high pressure steam and water and for low pressure. They may be fired with No. 6 or lighter fuel oils, gas or a combination of both fuels. The units are designed for forced draft operation, eliminating the necessity of a high stack. Kewanee-Ross Corp., Dept. CUB, Kewanee, Ill., or Iron Fireman Mfg. Co., Dept. CUB, 3170 W. 106th St., Cleveland 11, Ohio. (Key No. 485)

Tape Recorder

A new low priced Knight Tape Recorder is now available. It is excellent for playback of lectures and programs, for movie and slide commentary, language instruction, speech therapy and other purposes. It has piano-key type push-buttons for selection of operating functions and is easy to use. Operating functions include fast forward, playback, stop, record and fast reverse. Two speeds and dual track recording head provide a wide range of recording times. Recordings may be made from the microphone

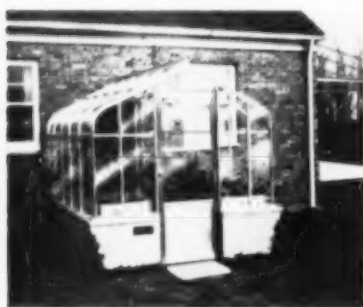


supplied, direct from any radio, FM tuner or phonograph. The Knight Automatic Control Tape Recorder is compact and light in weight and is housed in a sturdy luggage-type case. Allied Radio Corp., Dept. CUB, 833 W. Jackson Blvd., Chicago 7. (Key No. 486)

(Continued on page 76)

What's New ...

Everlite Greenhouses



Schools and colleges can give added impetus and greater interest to the study of botany with the new Everlite Aluminum Greenhouses. The greenhouses are prefabricated from high strength aluminum and can be assembled quickly and easily without expert labor or special tools. There is no maintenance required as the aluminum construction eliminates warping, shrinking, rusting, mold and rot and the need for painting. The greenhouses may also be useful for growing plants for research.

Everlite Greenhouses are produced in sizes ranging from residential to commercial and are furnished with hand operated vent machinery, nuts and bolts, castings, stainless glass clips, glass, putty, foundation plans and easy assembly plans. Benches, heating systems, automatic roof ventilators and other accessories are also available. Standardized, precision fabrication of high grade aluminum assures flexibility and high quality at reasonable cost. The model illustrated is a completely standardized curved eave aluminum greenhouse. **Aluminum Greenhouses, Inc., Dept. CUB, 14615 Lorain, Cleveland 11, Ohio. (Key No. 487)**

APSCO Staplers

A new line of staplers made in Sweden is being marketed in the United States under the trade name of APSCO by the Automatic Pencil Sharpener Company. Two models are available. Model 2002 loads 210 APSCO No. 2001 staples or any standard No. 1 wire staple. Loading of staples is easy and the sliding anvil allows for either stapling or pinning. The unit is finished in Forest Green with bright parts of polished chrome on a base of copper-nickel to resist corrosion.

APSCO Model 4004 is a low cost all-purpose stapler. It also has the sliding anvil for stapling and pinning. The base may be removed if not needed and the small size makes it a handy stapler plier that may be carried in the pocket. It loads 150 APSCO No. 4001 staples or any standard No. 1 wire staple. **Automatic Pencil Sharpener Co., Dept. CUB, 336 N. Foothill Rd., Beverly Hills, Calif. (Key No. 488)**

Floor Machines

Two new electric floor machines have been added to the Holcomb line of cleaning materials. The Holcomb Senior has a 15 inch brush spread. The Holcomb Junior is designed for small area smooth floor maintenance and is a light weight version of the senior. The Holcomb Senior is designed for use in maintaining large floor areas, has an adjustable tubular steel handle, retractable truck wheels and momentary contact double pole safety switch. It can be used for polishing, scrubbing, steel wooling, buffing and burnishing. The Junior has planetary gear system, fully adjustable handle, momentary contact safety switch and cast aluminum brush housing. It is especially adapted for use in classrooms, offices and other small areas. **J. I. Holcomb Mfg. Co., Dept. CUB, 1601 Barth Ave., Indianapolis, Ind. (Key No. 489)**

Thermo-Sash

A fully insulated aluminum window frame is offered in Thermo-Sash. This new aluminum insulating sash has been tested in actual installations indicating that the aluminum alloy construction



eliminates condensation and frost on the interior metal surfaces at normal room temperatures and humidity even when outside temperatures drop below 20 degrees below zero. The new sash matches in insulating qualities the performance of the double-paned insulated glass and the conventional brick or frame wall, thus saving heat in winter and improving air conditioning. The structural strength of the attractive aluminum frame enables the new insulating sash to meet all of the setting specifications for Thermopane, product of Libbey-Owen-Ford Glass Co., according to the manufacturer. **Kesko Products, Inc., Dept. CUB, Bristol, Ind. (Key No. 490)**

Rotary Snow Plow

The Jari Jr. Rotary Snow Plow can be switched for use as a power mower through use of the new 20 inch reel attachment. When used as a snow plow, the self-propelled unit will clear up to 4500 square feet and handle up to 18 tons of snow per hour. A 28 inch sickle-bar attachment is also available for converting the Jari Jr. Snow Plow into a power scythe. **Jari Products, Inc., Dept. CUB, 2938 Pillsbury Ave., Minneapolis, 8, Minn. (Key No. 491)**

Automatic Locker

The new Key Control Steel Lockers ensure fast, quiet, positive locking. There is no handle projection and noise is reduced to a minimum. The Berger "three-point" pre-locking mechanism is intact. Each Key Control locker is equipped with a 14 tumbler duo-lock and two keys. Each key control installation has a master key, fitting all locks in the installation.

In the new lockers the key serves as a handle. The door is unlocked by inserting and turning the sturdy key. It pre-locks when the key is removed and unlocks automatically when the door is closed. Positive locking and maximum resistance to prying are provided in the full length three-point latching bar. **The Berger Manufacturing Division, Republic Steel Corp., Dept. CUB, 1038 Belden Ave., N.E., Canton 5, Ohio. (Key No. 492)**

Heavy Duty Dishwasher

A new heavy duty immersion type dishwashing machine has been announced as the Model TA. A three tank immersion unit, it operates in either direction without any changes. Each tank is deep, designed for full immersion operation. The center tank is the power wash tank. Either end tank, depending on direction of operation, can be used for pre-soak, pre-rinse or for the final rinse.

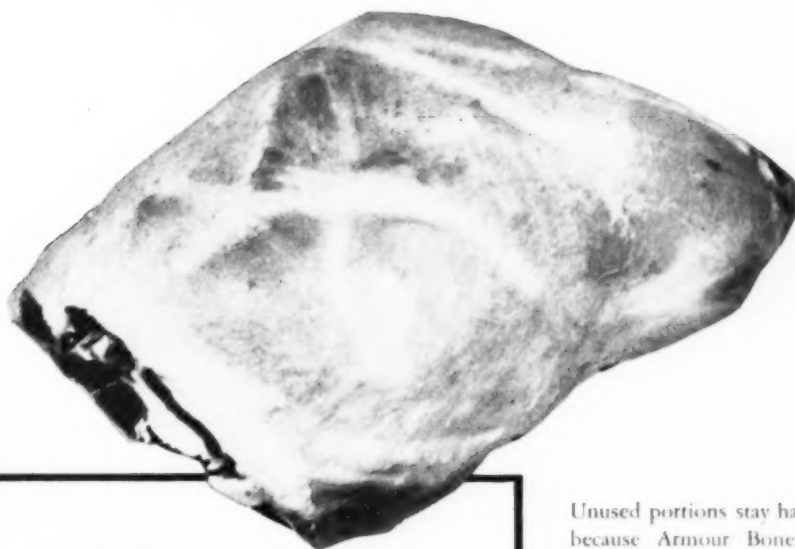
The Model TA is equipped with two swing faucets and two manually operated flexible hose sprays which can be used for pre-washing or for final rinsing. A sliding metal drain board on top of the machine provides a convenient working space. The perforated scrapper basket for catching food particles is easily removable. The power wash pump is newly designed for efficient operation. Each tank can be equipped with gas, electric or steam heating equipment. The machine can be furnished with all galvanized or all stainless steel tanks and back splash and trim or with galvanized



steel tanks with stainless steel back splash and trim. **Universal Dishwashing Machinery Co., Dept. CUB, 50 Windsor Place, Nutley 10, N. J. (Key No. 493)**

(Continued on page 78)

Read these timely tips on cutting kitchen costs with Armour Boneless Veal Legs



While other expenses mount, you can slash kitchen costs in three important ways with Armour Fresh Frosted Boneless Veal Legs.

1 Lower labor costs. You save time and labor because Armour Veal Legs have no bone to remove—they're oven-ready.



2 No waste. You use all the veal you pay for because it is already carefully trimmed.



3 Save on shrinkage. As a result of the Armour Fresh Frosted process, you can use the number of legs required for the immediate meal, and retain the balance in your freezer for future use.

Unused portions stay handy in your freezer, because Armour Boneless Veal Legs are Fresh Frosted. This means you can use the amount needed for immediate meals and keep the unused veal legs in your freezer, ready for future use. They are packed in 50 lb. units, each leg individually wrapped for easy storing and handling.

Start cutting your kitchen costs this week with Armour Boneless Veal Legs. For a helpful free recipe book on Fresh Frosted Veal and complete information on the Armour line of Fresh Frosted Meats, contact your Armour salesman, or write to:

ARMOUR

AND COMPANY

Hotel and Institutions Dept.
Chicago 9, Illinois

What's New...

Electric Generating Plant

The new Model 305CK is a 3500 watt A.C. electric generating plant designed to meet the demand for higher capacity small sized electric generating systems. It provides primary or emergency electric power for stationary, portable or mobile applications. The small, compact unit is powered by the Onan "CK" two cylinder, 4 cycle, air-cooled gasoline engine, built for rugged service. The unit is available in manual or remote starting models. For standby service, the line transfer control will automatically start the unit, within seconds, after highline power fails. When power is restored the plant is stopped automatically. D. W. Onan & Sons Inc., Dept. CUB, 6251 University Ave., Minneapolis 14, Minn. (Key No. 494)

Linen Marker

The Evermark hand stamping iron used for marking linens by dry transfers has been completely redesigned. The new features include a heating element that is a complete unit and is easily replaced when necessary; automatic control of temperature within correct range for marking all types of fabrics with adjustment screw on top to vary temperatures for each type of fabric; iron rest cast in

one piece with housing; natural finish handle which is easy to hold, is not slippery and stays cool; new type cooling



vents, and ground connection on rubber cord for safety. The polished face of the iron is large enough to apply transfers up to 2½ by 3½ inches. All parts can be easily replaced at low cost. The Evermark Div., The Roderking Corp., Dept. CUB, 5511 Euclid Ave., Cleveland 3, Ohio. (Key No. 495)

Automatic Sprinkler

A solid organic chemical is used as the fusible element in a new automatic sprinkler. It is designed to provide the

(Continued on page 80)

most sensitive, accurate and adaptable means to detect and stop fire. The construction of the chemical permits manufacturing sprinklers that are adaptable with temperature ratings ranging from 135 to 415 degrees. The sprinkler is strong and effective, made of corrosion-resistant materials entirely, and is known as the Globe Saveall Sprinkler. Globe Automatic Sprinkler Co., Inc., Dept. CUB, 250 Park Ave., New York 17. (Key No. 496)

Packaged Steam Generator

The Titusville Type WTP Steam Generator is a new completely shop-assembled water tube boiler available in capacities from 7500 to 27,500 pounds of steam per hour. It can be fired with heavy oil, combination heavy oil and gas, light oil, combination light oil and gas, natural gas, manufactured gas and coke oven gas. It is shipped as a complete package with all components installed, and requires only simple foundations and field installation work, thus reducing erection time and expense. For simplicity in operation the Type WTP is equipped with either a fully automatic or a semi-automatic set of combustion controls. Titusville Iron Works Co., Div. of Struthers Wells Corp., Dept. CUB, Titusville, Pa. (Key No. 497)

The OFFICE VALET
and **Checker RACKS**

Costumers, Ward-robe Racks, Locker Racks and Check Rooms.

An Answer to every Wraps Problem

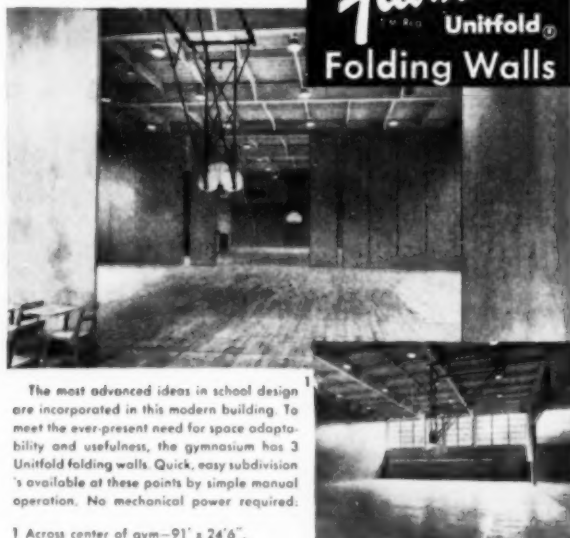
Welded steel Valet Racks keep wraps dry, aired and "in press"...end unsanitary locker room conditions...save floor space—fit in anywhere...standard in all strictly modern offices, factories, hotels, clubs, schools, churches, institutions or wherever there is a wraps problem.



Write for Catalog

VOGEL-PETERSON CO.
1121 West 37th St. • Chicago 9, Ill.

At the
CAMP CURTIN Jr. HIGH SCHOOL
Harrisburg, Pennsylvania



The most advanced ideas in school design are incorporated in this modern building. To meet the ever-present need for space adaptability and usefulness, the gymnasium has 3 Unifold folding walls. Quick, easy subdivision is available at these points by simple manual operation. No mechanical power required.

- 1 Across center of gym—91' x 24'6".
- 2 Main gym—auxiliary gym—47' x 17'.

Noteworthy features: Large area...all weight of Unifold walls is floor-supported...no need for special overhead steel...

Fairhurst
Unitfold
Folding Walls

2 Architects: LAWRIE & GREEN
Unifold does not interfere with steel web-bracing at ceiling wall juncture.

John T. Fairhurst Co., Inc.

45 West 45th Street

New York 19, N. Y.

in 1853

When Franklin Pierce was President of the United States, Thonet established offices in New York to introduce Bentwood chairs in America.

From the first Bentwood chair which was invented by Michael Thonet in 1830, to today's laminated bentply designs, Thonet's name has become synonymous with good chairmaking.

The first Bentwood chair, made of laminated veneers, was the forerunner of today's laminated bentply.



A HUNDRED YEARS OF PROGRESS

in 1953

Millions of Thonet chairs throughout the United States give comfort, service and satisfaction to their users. Time-honored by its long history of success, Thonet looks forward to another century of outstanding progress.



Today's laminated bentply chair 1302.



Choose from Thonet's large selection of furniture designs. Write for brochure illustrating the furniture you need. Dept. H L, 1 Park Avenue, New York 16, N. Y.



Visit our beautifully redecorated New York Show Room at
ONE PARK AVENUE

Other Show Rooms:
Chicago
Statesville, N. C.
Dallas

What's New . . .

Steel Shelving and Cabinets

A complete new line of quality steel storage shelving, library shelving, counters, storage cabinets and machine stands is now available from Royal Metal. The line is completely adjustable to any needs, parts are easily assembled with a minimum of bolting required, adjustments can be made without tools and the parts are packaged in standard units to simplify planning and purchasing. U. S. Standard steel gauges are used in all equipment. Included in the new shelving are open and closed type shelving, box inserts, sectional steel counters, office record storage equipment and tab card cabinets. Heavy duty benches, desks and machine stands are available for the school shop. **Royal Metal Mfg. Co., Dept. CUB, 175 N. Michigan Ave., Chicago 1. (Key No. 498)**

Dry Mop Cleaner

A vacuum system for cleaning dry mops is now available with an opening in the floor. The floor mounting plate of the Type F is mounted flush with the floor and connected to the Spencer Vacuum piping underneath the floor. It may be installed in corridors or other convenient locations. A plug, also flush with the floor, serves as a valve. When re-

moved, the air rushes into the slot. When the mop is passed over the slot, each strand is pulled down and violently agitated by the high velocity air. All



dust is removed and the mop is clean in seconds. **Spencer Turbine Co., Dept. CUB, Hartford 6, Conn. (Key No. 499)**

Land-Form Maps

A new series of modern Land-Form maps is now available on a new material known as Printex. It is plastic coated material which is strong and durable and has a water resistant surface which can be wiped clean with a damp cloth. It requires only normal care and has proven lasting qualities. The rollers are specially designed for maps and are of the highest quality. The boards are

(Continued on page 82)

steel, of standard design, and will fit on any standard map rails as well as special mountings.

Full utilization of space makes possible the use of inset maps to illustrate the political divisions of a continent, as well as some outstanding characteristic. Political boundaries are shown for ready comparison or location of features to be studied. A special type face is assigned to each group. Projections used were selected as most effective for the area to be portrayed. **Modern School Supply Co., Dept. CUB, Goshen, Ind. (Key No. 500)**

Universal Tube Bender

A new universal gear type tube bender is being offered which will bend any type of tubing, including hard drawn copper and hard temper steel. The No. 270 F bender is constructed to be positioned on the tube at any point where a bend is desired. It can be used to make right or left hand bends, return bends, offset bends and right angle bends. Benders are designed to be held by hand, clamped in a vise or bolted to a bench. They are available for tubing from 3/8 inch to 1 1/8 inch outside diameter. **The Imperial Brass Mfg. Co., Dept. CUB, 1200 W. Harrison St., Chicago 7. (Key No. 501)**

There's SAFETY in this key PROTECT your lockers with DUDLEY LOCKS

This exclusive and unique key can not easily be duplicated by commercial locksmiths. It gives protection to your lockers unavailable with any other lock. And after all, what is a locker lock for if not to prevent unauthorized opening through key copying — or any other means. Get Dudley locks and be sure. Write for details of the Dudley Self-Financing Plan, and catalog.



RD-2
Rotating dial
combination with
Master-Chart
control

P-570
Master-Keyed
combination with
the SAFE
Dudley key



**DUDLEY LOCK
CORPORATION**

Dept. 122, Crystal Lake, Illinois



Women are discreet instinctively. The modern powder room is equipped with the SANIBAG method of quick, modest disposal of sanitary napkins. SANIBAG service is practically a must in motels, schools, hotels, restaurants and public buildings.

SANIBAG service not only pays off in good will, but with dollars saved in maintenance costs. Also a tremendous saving in plumber's bills arising from toilet stoppages. To provide SANIBAG service is simply good business judgment.

When writing for free samples and complete information, please include the name and address of your supply merchant.



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Blythe Park School, Riverside, Ill. Floor in block-patterned Northern Hard Maple. Perkins & Will, Chicago, Architects-Engineers.

NORTHERN HARD MAPLE



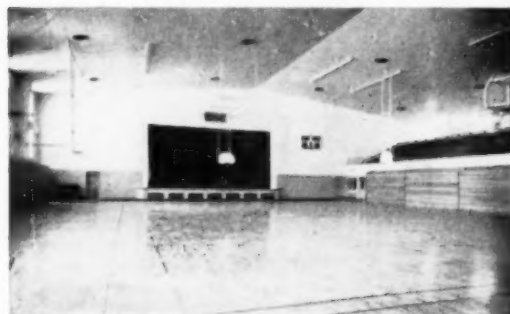
...every one!



University of Florida, Gainesville, Florida. Floor of Northern Hard Maple. Mr. Guy. C. Fulton, Architect to Florida State Board of Control, Gainesville, Florida



Philip Sheridan School, Township of Tonawanda, Kenmore, N.Y. Architects: F. J. and W. A. Kidd, Buffalo.



Pius XI High School, Milwaukee, Wis. Architects: Mark F. Pfaller Associates, Wauwatosa, Wis.

the gymnasium floor that's SUPERIOR...in every way!

The foresight of America's school building planners stands out in especially bold relief in the choice of flooring. Northern Hard Maple is, far and away, favorite among schoolmen...and with good reason. This tough-grained wood has tremendous resistance against scuffs and scars and dents—high *resiliency*—cheerful warmth and brightness—thrifty ease of cleaning and maintenance. And "*there's always a new floor underneath!*" when long usage calls for refinishing (a simple process nowadays!). Readily available in all grades—look into the economy of colorfully grained **MFMA** Second Grade, especially in the tight-laying 1½" face widths. See Sweet's (Arch. 12k Ma) for specification details on regular strip and mastic applied blocks and patterned flooring, or write . . .

MAPLE FLOORING MANUFACTURERS ASSOCIATION

Suite 551, Pure Oil Bldg., 35 East Wacker Drive
CHICAGO 1, ILLINOIS

FLOOR WITH **NORTHERN** HARD MAPLE
BEECH AND BIRCH

What's New ...

Reciprocating Compressors

A new line of sealed reciprocating compressors is now available. Known as XD (Extra Duty) Meter-Misers, the line has models ranging from 1/4 h.p. through 7 1/2 h.p. in size. The compressors are offered in air-cooled, water-cooled, combination air and water-cooled and models for use with evaporative condensers. All moving parts are precision machined and tested.

The light weight compressors feature an extremely compact design with a motor-compressor unit sealed against dirt and moisture. All have direct-drive operation between motor and compressor, housed in the same casting. The "Load Selector" built into the precision-made pistons can be quickly adjusted to meet the load requirements of each individual application. A plunger-type lubricating pump forces oil to every bearing surface. There is a permanent supply of oil and the compressor is equipped with low-pressure control. **Frigidaire Division, General Motors Corp., Dept. CUB, Dayton, 1, Ohio. (Key No. 502)**

Improved Peelmaster

The Peelmaster, for peeling all hard skinned vegetables, has been redesigned for greater efficiency and streamlined ap-

pearance. It has a new type non-leakable big door, new self-tightening gaskets on the door, new pouring cover, new non-rustable legs, new water-inlet spray and new pot interior to reject stones. The "friction rub" principle peels 20 pounds of potatoes in approximately one minute.

The entire interior and top, legs and corrugated sides are made of rustproof



aluminum. The new machine is available in the floor type Model A and the portable table Model B, illustrated. The body is 16 inches in diameter with outlet and door shelf 21 inches wide. The oversize 2 inch drain is made so that peels do not clog the machine and there is but one bearing to oil. **Service Appliance Co., Dept. CUB, Van Tassel St., Norwalk, Conn. (Key No. 503)**

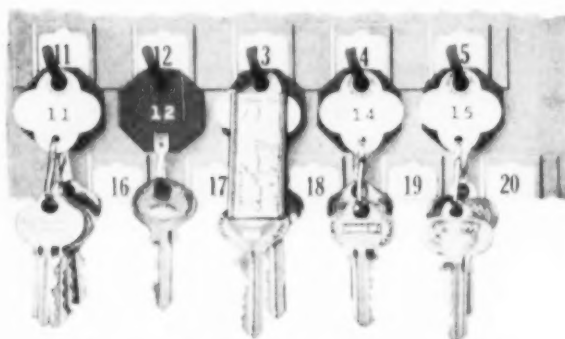
(Continued on page 84)

Balanced Plant Food

Developed to provide the perfect balanced diet for shrubs, flowers, potted plants, trees, evergreens, lawns, vines and vegetables, Plant Shoot is a new concentrated, water soluble plant nutrient. It has a guaranteed chemical analysis of 20 per cent nitrogen, 20 per cent phosphoric acid and 20 per cent potash. It can be applied indoors or out, in any kind of weather, and will not burn plant life or injure human skin. It may be applied simultaneously with the new Nott soil conditioner, Soilife. **Nott Mfg. Co., Dept. CUB, Mount Vernon, N. Y. (Key No. 504)**

Snow Thrower

Designed to remove any type of snow under any snow condition with maximum safety, the new Sno Mate Snow Remover is a self-propelled snow thrower. All moving parts are well guarded and the unit is powered by a special 2.5 h.p. engine, designed to start and operate efficiently in any weather. The Sno Mate cuts a clean path 24 inches wide and throws the snow in any desired direction up to 30 feet. The adjustable chute tip regulates the distance snow is thrown. **Tri D. Engineering & Mfg., Dept. CUB, Rock Island, Ill. (Key No. 505)**



Cure Key Troubles with



- Any key instantly available — lost keys never a problem
- Neat, compact metal cabinet — easy to set up and operate
- Expansion unlimited
- Control by secret code

Attach to
your letter-
head and
mail today

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I would like to have, without obligation,
literature describing your product.

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City, State

Monroe FOLDING TABLES

AND TABLE TRUCKS

THE ORIGINAL
FOLDING PEDESTAL TABLE

TWO TYPES OF FOLDING TABLE TRUCKS

No. TF
12 Tables stacked flat
for wide doors

No. TU
10 Tables or less on
edge for narrow doors

Write for Catalog, Prices and Discounts

THE Monroe COMPANY

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STUDENTS WANT

FULLY SATISFYING SHOWER BATHING

This all students know: that fatigue from work or play *can* be washed away and the feeling of fitness restored IF the shower is *completely* satisfying. To measure up to their wants the **SHOWER HEAD** must deliver a full spray, evenly distributed in an undistorted pattern, and directed as desired.

Management Wants Refreshed
Students and **MONEY SAVINGS**

—BOTH ARE THE CONTRIBUTIONS OF

THE NEW SLOAN

Act-O-Matic

SHOWER HEAD

In this revolutionary new shower head you get the Desired Dozen Features:

- 1 **Self-cleaning.** Patented automatic action thoroughly flushes the interior of shower head with each use.
- 2 **No clogging.** All clogging particles are automatically and completely discharged.
- 3 **Simple, reliable, long-lasting.** Only one moving part inside the solid brass, high chrome finished housing.
- 4 **Greatly improved spray pattern.** Cone-within-cone spray gives an evenly distributed shower.
- 5 **Fingertip volume control.** Foolproof volume control increases or decreases rate of water flow to suit bather.
- 6 **Spray direction adjustable.** Never-leak ball joint enables bather to direct spray as desired.
- 7 **No dripping.** New design principle prevents dripping after shower has been turned off.
- 8 **Water economy.** Exclusive design provides efficient bathing with big water savings.
- 9 **Fuel savings.** It costs money to heat and pump water; thus water economy means saving of costly fuel.
- 10 **Maintenance eliminated.** Since this shower head is always free from clogging and other faults it requires no servicing.
- 11 **Easily, quickly installed.** Equipped with connector that fits all standard shower arms on old or new installations.
- 12 **Vandal-proof model.** To prevent tampering or theft, a vandal-proof model is available at slight additional cost.



SLOAN VALVE COMPANY
4300 WEST LAKE STREET • CHICAGO 24 • ILLINOIS

Please send me illustrated folder containing full information on the unique New SLOAN *Act-O-Matic* SHOWER HEAD.

Name and Title
Name of College or Uni.....
Street Address.....
City, Zone & State.....

This Shower Head is
AUTOMATICALLY
SELF-CLEANING
Each Time
it's Used

What's New ...

Plastic Dinnerware Cleaner

A new stain remover especially recommended for Melamine molded dinnerware is introduced as Dip-It. It can be used on both plastic and china and will not harm plastic surfaces. Dip-It removes film buildup while bleaching out stain. It is harmless to colors, does not discolor white dinnerware, leaves no odor and prolongs the serviceable life of plasticware by keeping it fresh and new in appearance. The product has been field tested for over two years and is said to have the approval of the American Cyanamid Company, basic manufacturer of Melmac plastic. Dip-It can also be used for removing burnt in stains from Pyrexware and aluminum cooking utensils. Economics Laboratory, Inc., Dept. CUB, Guardian Bldg., St. Paul 1, Minn. (Key No. 506)

Portable Microfilming Camera

The result of over five years of research, the new Diebold portable motorized microfilming camera is a compact unit designed for purchase by the user rather than for rental. It is relatively low in cost and is so designed as to eliminate loading, threading and film handling through a magazine loading feature. The film cartridge holds 50 feet

of 16 mm. film and the unit can be operated by inexperienced personnel. All types of copy can be microfilmed and centrally located Diebold processing service centers develop exposed film for all needs.

The new unit will photograph copy up to 11 inches wide and of any length, at a reduction of 24X. It is small enough



to be placed on any desk and accommodates records of mixed weights and sizes up to cardboard thickness. Records are microfilmed rapidly and the magazine loading as well as the operation are simple. The unit weighs only 20 pounds. Diebold Incorporated, Dept. CUB, Flo-film Division, P. O. Box 127, Norwalk, Conn. (Key No. 507)

(Continued on page 86)

Photo Copy Machine

Anything typed, written, printed or drawn can be quickly and easily copied without muss or fuss on the new "Copy-Stat." This new photo copy machine makes dry copies simply. It can be operated by unskilled help for making error-free copies that are legally acceptable. A sheet of sensitized paper is exposed with the original to be copied, the exposed sheet is combined with a second sheet of "Copy-Stat" paper, inserted in the machine and in a few seconds the copy is ready. The machine can also produce two-sided copies when required. General Photo Products Co., Inc., Dept. CUB, Chatham, N. J. (Key No. 508)

Hydrocide Colorcoat

A new paint which primes, seals and finishes highly porous masonry surfaces is introduced as Hydrocide Colorcoat. It is a specially formulated oil base paint with aggregate for filling in cracks and chips on old buildings and preventing them in new buildings. It is easy to use, long lasting and stands rough abuse and weathering. Hydrocide Colorcoat is available in six limeproof colors and can be applied by brush or spray. L. Sonneborn Sons, Inc., Dept. CUB, 80 Eighth Ave., New York 11. (Key No. 509)

HERRICK

**STAINLESS STEEL
REFRIGERATORS**

Performance-Proved

at the

UNIVERSITY of OKLAHOMA



Herrick units were supplied by Goodner Van Engineering Company, Tulsa, Oklahoma.

The HERRICK Model RSS66 Double-Front Pass Through above is one of seven HERRICK Stainless Steel Refrigerators serving Oklahoma University's new Memorial Union Building at Norman. These capable HERRICK units assure the ultimate in fresh, flavorful foods. For trouble-free, low-cost-per-year service, HERRICK is tops. You'll like HERRICK. Write today for name of nearest HERRICK supplier.

HERRICK REFRIGERATOR CO. • WATERLOO, IOWA
Dept. C Commercial Refrigeration Division

HERRICK *The Aristocrat of Refrigerators*

durable

AND

Smart

FURNITURE

**TABLE with
CAPTAIN'S
CHAIRS**



Will add measurably to the utility and attractiveness of student lounge or recreation rooms.

Wood grain Formica table top and edge. Heavy form-fitting scoop seat. Extremely comfortable and rugged.

Table
No. 8036

Chairs
No. 2077

AMERICAN

CHAIR COMPANY

MANUFACTURERS

SHEBOYGAN, WISCONSIN

For prices and complete information, see your dealer or write us.



At your age!

If you are over 21 (or under 101) it's none too soon for you to follow the example of our hero, Ed Parmalee (above) and face the life-saving facts about cancer as presented in our new film "Man Alive!". You'll learn, too, that cancer is not unlike serious engine trouble—it usually gives you a warning:

(1) any sore that does not heal (2) a lump or thickening, in the breast or elsewhere (3) unusual bleeding or discharge (4) any change in a wart or mole (5) persistent indigestion or difficulty in swallowing (6) persistent hoarseness or cough (7) any change in normal bowel habits. While these may not *always* mean cancer, any one of them should mean a visit to your doctor. Most cancers are curable but *only* if treated in time!

You and Ed will also learn that until science finds a cure for *all* cancers your best "insurance" is a thorough health examination every year, no matter how well you may feel—twice a year if you are a man over 45 or a woman over 35.

For information on where you can see this film, call us or write to "Cancer" in care of your local Post Office.

**American
Cancer
Society**



Save Time, Labor Money, on floors!

- ★ SCRUBBING
- ★ POLISHING
- ★ STEEL-WOOLING
- ★ DISC SANDING
- ★ BUFFING
- ★ GRINDING

These big-power American Machines are engineered to *speed up* all kinds of everyday jobs of floor maintenance. The American DeLuxe, above, trims costs and saves labor in scrubbing or polishing asphalt or rubber tile, terrazzo, and all other types of floors . . . removing gummy, sticky accumulations . . . sanding operations . . . steel wool operations, dry cleaning . . . and buffing or burnishing. 14", 16" and 19" models. For wet scrubbing, can be equipped with corrosion-resistant wide-mouth tank. Follow this with new American Water Pick-Up Machine for fast work with vacuum! Also, you can reduce maintenance and cleaning on *any* floor with American cleaners, seals, finishes and waxes.

SERVICE . . . by American distributors in principal cities is very fast . . . avoids costly delays! Each distributor has factory-trained men and genuine American repair parts for your service needs.



Fast, efficient American Water Pick-Up Machine . . . Use it to vacuum up dirty water after electric scrubbing your floors. Heavy duty squeegee leaves a clean dry path 29" wide . . . 15 gal. tank.



American Finishes are finest quality—complete line for all floors—seals, finishes, waxes and cleaners.



50 YEARS OF PROGRESS
Famous American Machines are all engineered, manufactured, sold and serviced by American!

AMERICAN FLOOR MACHINES

The American Floor Surfacing Machine Co.
590 So. St. Clair St., Toledo 3, Ohio

Send latest catalog on the following, without obligation

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|---|--|
| <input type="checkbox"/> DeLuxe Maintenance Machine | <input type="checkbox"/> Water Pick-Up Machine |
| <input type="checkbox"/> Wide Mouth Tank | <input type="checkbox"/> Floor Finishes |

Name.....
Street.....
City..... State.....

SEND!

What's New . . .

Miller Lexington

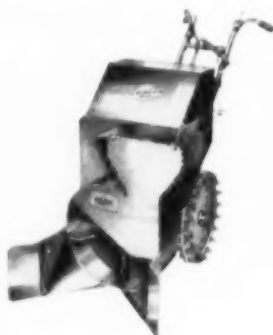
The new Miller Lexington fluorescent luminaire comes in two lamp and four lamp, 4 and 8 foot types for general line and slimline lamps. It embodies the most recent developments in illuminating engineering, is of rigid steel construction and has 45 degree lengthwise and 35 degree crosswise shielding with extremely low brightness. The new fixture is simple to install and maintain and is available with a choice of metal, plastic and glass panel sides. **The Miller Co., Dept. CUB, Meriden, Conn. (Key No. 510)**

Snow Remover

The new Model ISB Snow Blo has been especially designed for institutions with large walk and driveway areas. It is equipped with a 3½ h.p. gasoline engine, is self-propelled and rides on hi-traction cast lug wheels. Snow may be blown from either side of the machine.

The machine clears a 1½ foot swath through heavy snow and is equipped with wings which may be attached to clear a 2 foot swath through lighter and drier snow. A 2½ foot bulldozer blade is available as an accessory for removing snow that is too wet to blow. The machine has an automatic clutch for easy

engine starting, gears and traction clutch run in oil in a sealed housing, adjustable tabs control the distance snow is thrown, and the directional control handle is



within easy reach of the operator. **Sensation Mower, Inc., Dept. CUB, Ralston, Neb. (Key No. 511)**

Twin-Head Freezer

A new type twin-head, two-flavor continuous freezer for frozen custard and all types of soft frozen products is being introduced. It has fully automatic performance of both barrels as well as independent action by each barrel. It is simple to operate and has new features

including compensating automatic mix feed to barrels as the product is drawn off and new agitators, barrels and mix container placed in refrigerated insulated compartment with hinged lid. Floor and counter models are available with a choice of three condensing unit sizes. **Mills Industries, Inc., Dept. CUB, Chicago 39. (Key No. 512)**

Sheetrock Wallboard

Two new Sheetrock Gypsum Wallboard products have been developed to meet special fire code requirements. Sheetrock Firecode 60 and Sheetrock Firecode 45 introduce ⅝ inch and ½ inch thickness that have a 60 minute and 45 minute fire-resistance rating respectively when used on ordinary partition framing or with floor and ceiling constructions that combine joists, subflooring and finished flooring. They permit use of single layer drywall in many areas where codes require extra fire-resistant construction.

The new products appear the same as ordinary Sheetrock Gypsum Wallboard but they incorporate a specially developed gypsum core with additives that give them the special fire-resistant characteristics. **United States Gypsum Co., Dept. CUB, 300 W. Adams St., Chicago 6. (Key No. 513)**

(Continued on page 87)



HUSKIEST CHAIR MADE



Hostess
FOLDING
CHAIR

● Choose the chairs that are made for long years of service—BTC Hostess Folding Chairs. Their husky, all-steel frames withstand hard use in hotels, institutions and schools.

● Hostess Folding Chairs are comfortable, non-squeaking, easy to set up and take down. Choice of most radio and TV stations. Come in 6 handsome baked enamel finishes and 8 beautiful plastic coverings. Full-size seats and backs fold together to safeguard upholstery in storage. Attachments for alignment and row-spacing—also portable hand trucks for storing 24 or 36 chairs.

FREE FOLDER Send for new, full-color folder describing complete line of Hostess Folding Chairs and Banquet Tables.



THE BREWER-TITCHENER CORPORATION, Cortland, N. Y.

LOOKING FOR SOMEONE?

Someone to fill a vacancy in your staff—a Business Manager—Superintendent of Buildings and Grounds—Purchasing Agent—Director of Food Service and Dormitories?

Or maybe you are thinking about making a change.

If so, consider placing a "Want Advertisement" in the next issue of College and University Business.

It costs but 10c a word (minimum charge of \$2.50) to place your story before the administrative officers of colleges and universities in this country and Canada.

"Want Advertisements" are working successfully for others—they can do the same for you.

WRITE TO: Want Advertisements

COLLEGE and UNIVERSITY BUSINESS

919 N. MICHIGAN

• CHICAGO 11, ILLINOIS

What's New . . .

Powdered Drain Cleaner

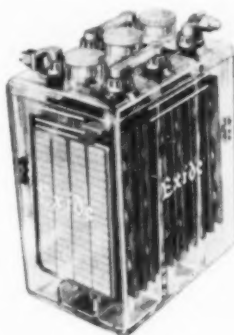
An inexpensive, quick-acting drain cleaner is offered in a new product known as Kenize. It is a powdered material which when mixed with water and poured into a clogged drain, breaks through obstructions and clears sink traps, grease traps or sewer lines in a matter of minutes. It depends upon the chemical principle of Kelite pH Control for its grease-cutting action. Kelite Products, Inc., Dept. CUB, 1250 N. Main St., Los Angeles 12, Calif. (Key No. 514)

Plastic Sealed Batteries

The new Exide-Manchex Batteries are the result of years of research engineering and laboratory and field testing. They offer economies of lower initial and maintenance costs, increased efficiency and long, trouble-free life. Known as Type CME, the batteries are available in both two-cell and three-cell units built to meet the most rigorous service demands in stationary small power applications. Colored pilot balls reveal at a glance the state of charge in the batteries, thus facilitating maintenance.

The plastic container and cover are transparent, light in weight and have high shock resistance. The polystyrene container surface is smooth and easily

kept clean and the polystyrene is impervious to effects of electrolyte, annealed for high mechanical strength and heat resistance and permanently sealed so that the electrolyte will not leak out. The



batteries have long life Manchester positive plate and double insulation. Installation space in emergency and other power units is saved by the reduced weight and decreased over-all size of the new batteries. They are available in three styles of containers and in capacities of 8, 16 and 24 A.H. at the eight hour rate. The Electric Storage Battery Co., Dept. CUB, P.O. Box 8109, Philadelphia 1, Pa. (Key No. 515)

(Continued on page 88)

Athletic Padding

A new, scientifically correct protective athletic padding is now available in sheet form. Called Spongex Plastic, the new material is expanded polyvinyl chloride, not rubber. Its structure is designed to yield correct shock absorption properties in that it absorbs shock with a minimum of rebound. In addition its inert characteristics are said to prevent disintegration resulting from body oils and perspiration and it does not absorb moisture. It is supplied in sheet form, about 40 by 50 inches, $\frac{1}{8}$ inch thick, and may be cut with ordinary shears into whatever shape is needed. The Sponge Rubber Products Co., Dept. CUB, Shelton, Conn. (Key No. 516)

Plastic Adhesive Bandage

Life Skintape is a new plastic adhesive bandage for first-aid use. The light weight, thin plastic adhesive is water-proof, oilproof and greaseproof and is comfortable to wear since it stretches with the skin. It is flesh colored and does not come off in water. The company also has a full line of medical adhesive tapes and finger bandages in cloth fabrics as well as in plastic. Lifeline Products Inc., Dept. CUB, Morris Heights, New York 53. (Key No. 517)

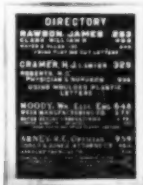
DAV-SON BULLETIN & DIRECTORY BOARDS

a basic visual aid

A style and size for every need—to carry your important and timely messages. Quality built—to provide greatest reading ease—designed to fit into the most dignified surroundings—savings priced! DAV-SON can supply everything from the smallest desk name plate to the largest bulletin or directory. Write TODAY for full particulars and prices.



CORK BACK BOARDS
With or without locking glass doors. Illustrated is 24x36" board, wooden frame, walnut finish. \$9.20, f.o.b., Chicago.



DAV-SON Changeable Letter Bulletin Boards—variety of sizes—indoor or outdoor use. With or without locking glass doors.

INFORMATION

Name Plates for Desks, Doors, or Corridors—choice of matching wood bases. Names may be changed at low cost.



Write for complete information!

A.C. DAVENPORT & SON, INC.
ESTABLISHED 1922
311 N. DESPLAINES ST., CHICAGO 6, ILL.

Fit to be Tied!

BASCO APRONS

Be Tied to Our Apron Strings!

For Every Protective Need!

And they're made to last!

Ease of fit, endurance and economy are always yours—with BASCO! Strong and serviceable to give maximum protection. And best of all—they're BASCO-Quality made! (Your complete assurance of the finest materials and workmanship—longer service and wear!)

Shop Aprons—Butchers' and Cooks' Aprons—Waitress Aprons

In all weights of duck, denim, plastic and DuPont Neoprene. Made to your specifications and up to our standards. Dependable quick service on all orders!

Bags • Shower Curtains • Allergic Pillows Mattress Covers • Rubber Sheeting Painters Drop Cloths

Let us know your requirements for these products. If they're not in stock, we'll tailor-make them for you.

Send for literature and prices!

Jobbers or Dealers—Write for our interesting proposition.

ASSOCIATED BAG & APRON CO.
PHONE Albany 2-7121 2650 W. BELDEN AVENUE
CHICAGO 47

What's New...

Anti-Shrink Blankets

A special Anti-Shrink treatment process is now applied to Horner Blankets. This keeps shrinkage of the blankets under 5 per cent, after repeated washings, with reasonable care in laundering. The blankets retain their soft, fluffy feel and look after either laundering or dry cleaning. The Anti-Shrink treatment keeps the all-wool fibers unmatted and soft.

Horner blankets are available in a selection of colors including green, rose, cedar, blue, gold and wine. They retain their size and shape as well as their beauty with repeated use. The blankets, under the new process, comply with all requirements of Commercial Standard CS136-46 as issued by the National Bureau of Standards and adopted by the American Hospital Association. **Horner Woolen Mills Co., Dept. CUB, Eaton Rapids, Mich. (Key No. 518)**

Rubber-Base Outdoor Paint

The new Tropical Cementkote is a rubber-base paint for outside masonry application. Based on synthetic rubber resin, the new product can be applied to cement, cinder block, stucco, brick and stone and provides exceptional resistance to moisture penetration and alkali reaction. Flaking and cracking of masonry caused by freezing and thawing are also reduced by the moisture sealing action of Cementkote.

No priming or special preparation is needed to paint new construction and no waiting for curing or seasoning is required. Cementkote has a mild, controlled chalking effect and rain will wash off dirt, dust and soot, leaving a fresh, clean appearance. **The Tropical Paint & Oil Co., Dept. CUB, 1246 W. 70th St., Cleveland 2, Ohio. (Key No. 519)**

Silver Washer and Drier

Model A-3 is a new Foley Silver Washer and Drier with a capacity of 900 pieces of silver per hour. It has been especially designed for use in medium and smaller sized cafeterias and other food service operations where the quantity of silver would not appear to warrant the use of the larger models. No special electrical line is necessary for operation of the new machine which can be installed under a counter. It is a removable drum type combining all the proved features of the larger model A-7 with some improvements to facilitate maintenance.

The new machine is completely automatic in operation and goes through its entire three phase cycle of washing, rinsing and drying without supervision. **Foley-Irish Corp., Dept. CUB, 31 Washington St., Brooklyn 1, N.Y. (Key No. 520)**

Product Literature

- The Radiant "Screen Finder" is a device which swiftly calculates correct projector to screen distance, correct screen size, lens focal length, running times and audience capacities for every type of projector. It is offered by the Radiant Screen Co., 1299 S. Talman Ave., Chicago 8. **(Key No. 521)**

- All phases of use and installation of **Sanymetal Utility Nailing Channel** for light suspended ceiling construction are described in a new four page bulletin, **Form UC-52**. Drawings illustrate use for installing kerfed acoustical tile with and without building paper or with gypsum backing. The booklet is available from the Sanymetal Products Co., Inc., Suspended Ceilings Division, 2093 E. 18th St., Cleveland 15, Ohio. **(Key No. 522)**

- "New Decorating Magic" is the title of a new booklet issued by The Harvard Manufacturing Co., 6201 Woodland Ave., Cleveland 4, Ohio. The booklet incorporates the latest developments in bedroom planning and explains the many adaptations of the Harvard Frame. It contains a comprehensive discussion of metal bed frames and their uses. **(Key No. 523)**

- "Beautiful Lyon Steel Kitchen Cabinets for Schools, Hotels, Clubs and Other Institutions" are described and illustrated in a new bulletin issued by Lyon Metal Products, Inc., Aurora, Ill. Kitchen layouts for institutions are illustrated by photographs of actual installations of Lyon kitchens in schools, hospitals, clubs and churches. Features of Lyon kitchens which are discussed include air control unit, Tap-o-matic handles, Twirl-o-matic corners, adjustable shelves, and other construction features. **(Key No. 524)**

- The complete line of floor cleaning equipment available from Geerpres Winger, Inc., P.O. Box 658, Muskegon, Mich., is illustrated and described in a new bulletin and catalog insert **No. 251-2**. Specifications and design features of the wringers and castered chassis are described. **(Key No. 525)**

- A 20 page brochure has been prepared on the use of the "Thin Set" method of installing clay tile. Entitled "Miracle Adhesive Products for Thin Set Genuine Clay Tile," the booklet provides a comprehensive ready reference manual fully describing this method. Detailed two color isometric drawings show how to install tile on new projects or for modernization of present buildings, the installation of tile over old surfaces, and how to set tile on floors, walls and ceilings. The booklet is issued by Miracle Adhesives Corp., Dept. CUB, 214 E. 53rd St., New York 22. **(Key No. 526)**

- Reproducing yearbooks, reports, forms and other types of printed material by photo offset from typed copy can now be expedited. A new booklet, "Typographic Planning for Typewriter Composition," has been released as a guide to the preparation of master copy, as well as a useful instruction book for the classroom. Issued by International Business Machines Corp., 590 Madison Ave., New York 22, the booklet explains the relation between inches and printers' measurements, the point and the pica, line spacing and leading are discussed, and instructions are given for determining type sizes. The booklet has a soil resistant cover and is plastic bound to lie flat when open. **(Key No. 527)**

- "The Story of Safety" and how it is achieved in a large organization is told in a booklet issued by E. I. du Pont de Nemours & Co., Wilmington, Del. Realizing that safety is simply sound business procedure, the company instituted a safety program which takes into account every possibility. As a result of constant research and watchfulness most possible accidents are avoided. **(Key No. 528)**

- Designed for distribution to college graduates with technical educations is a new booklet graphically describing research, development and manufacturing operations of a modern pharmaceutical firm. Entitled "Your Future and Ours," the booklet contains 36 pages of information on Parke, Davis & Co., Detroit 22, Mich., and traces a Parke-Davis product from original research through product development, engineering, manufacturing and sales. **(Key No. 529)**

- How **Erie City VI Steam Generators** are constructed, how they operate, design features and the VI circulation system are some of the points covered in a new booklet on the subject issued by Erie City Iron Works, Erie, Pa. The factory assembled VI's combine 2 drum water tube boiler, integral water cooled furnace, brickwork, insulation and complete steel casing. Various types of VI steam generators are described and there is a list of representative users of this equipment including schools, colleges and hospitals. **(Key No. 530)**

Suppliers' News

Loxit Systems, Inc., 1217 W. Washington Blvd., Chicago 7, manufacturer of Loxit Tru Snap All aluminum chalkboard trim, announces its appointment as exclusive national distributor of Rite Green chalkboards and Tylakork tackboards manufactured by **Tylac Co., Monticello, Ill.**

The Herman Nelson Corp., Div. of Air Filter Co., Inc., manufacturer of heating and ventilating equipment, announces removal of its offices from **Moline, Ill.** to 217 Central Ave., **Louisville 8, Ky.**

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Bausch & Lomb Optical Co.
- 482 Liquid Detergent
Franklin Research Co.
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Fairbanks, Morse & Co.
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Bell & Howell Co.
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Iron Fireman Mfg. Co.
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Key

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E. I. du Pont de Nemours &
Co.
- 529 "Your Future and Ours"
Parke, Davis & Co.
- 530 Erie City Steam Generators
Erie City Iron Works

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C-52
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Mfg. Co.

Kitchen Cabinets"
Products, Inc.

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Generators
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January, 1953

Please ask the manufacturers, indicated by the numbers I have circled, to send further literature and information provided there is no charge or obligation.

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January, 1953

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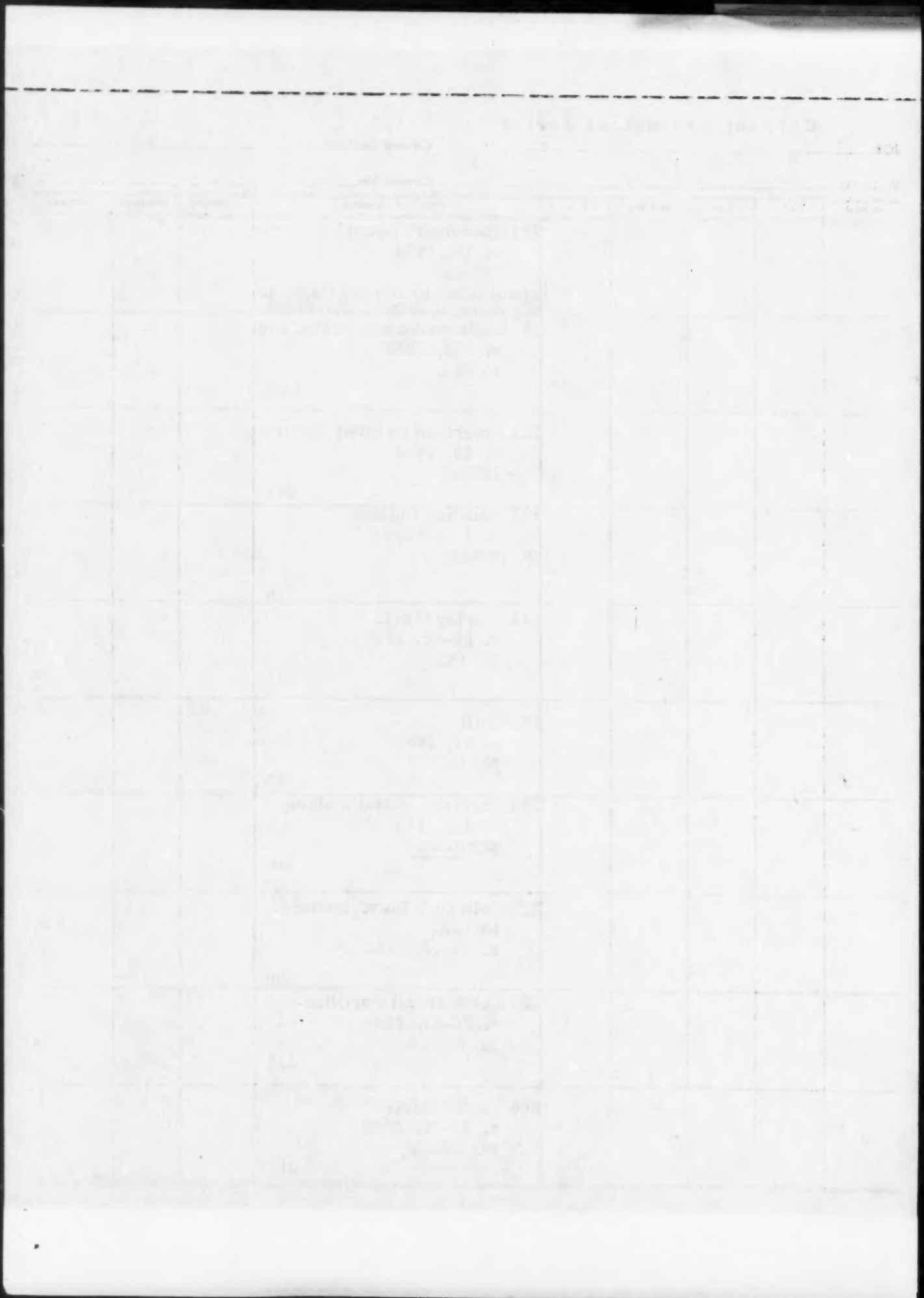
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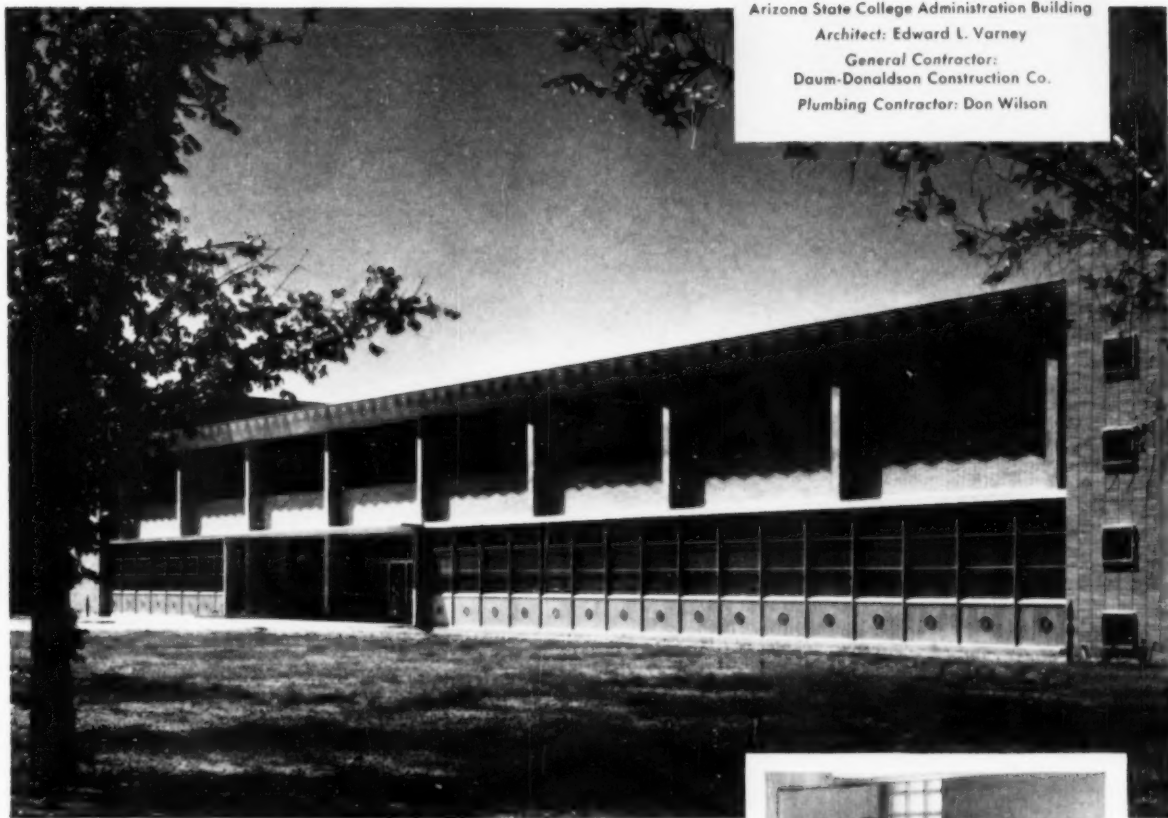
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